Report to the U.S. Commission of Fine Arts on the environmental design of streets in Washington, D.C.

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Cambridge Seven Associates, Inc. / Cambridge, Massachusetts / New York, New York

This study was conducted by sending teams of designers into the city of Washington to analyze and evaluate the environmental design conditions of the city streets. Our interest was in establishing and recording the present environmental conditions and developing from these criteria and guidelines for future design development. In our analysis we stressed orientation and clarity of movement as desirable conditions and evaluated existing situations with these ends in mind. We not only looked for ways to make the street environment more pleasant, but also looked for ways of developing more meaningful experiences by making the streets clear and legible aspects of the environment.

The design suggestions in this programmatic study should not be confused with final designs. It is important to understand that no exact visual appearances are intended. Instead of concentrating on premature specific designs, we want to focus on the approach to the problem. Because of its nature this study does not deal with all the long-range planning proposals or economic factors involved, but rather clarifies goals and possible approaches to solutions. The intention is to focus attention on the design of streets as places for people, where the animation and life that is generated will help make the city an active place.

Two positive aspects of Washington streets that were immediately apparent were the ubiquitous trees and open skyline. We feel that the strong tree-lined character of the streets should definitely be reinforced by an immediate campaign to plant many more trees. This single act can do much for strengthening the unique character of Washington, and it should be done boldly and at a large scale. The consistent lines of trees, clear of overhead wires and utility poles, must be maintained at all costs since it is the combination of these two factors that does most to produce Washington's strong and unique environmental character.

The entire graphics system should be studied, and ambiguous and redundant signing should be eliminated. In some cases where there is a proliferation of control signs, such as for parking regulation, we recommend that the ordinances be re-evaluated. Simplification of parking signs would mean greater clarification for the user, improved graphic appearance of the signs, and a substantial clean-up of the streetscape itself. The signs that are now necessary may be reduced to minimal numbers and become elegant objects in the street.

The following is a description of the design tasks that must be accomplished if a total, integrated design for the city environment is to be the result. We strongly recommend that a number of actual demonstration projects be initiated such as typical streets. These should be designed and executed as positive examples of how the environment will respond to a careful and concerted design effort.

1. GRAPHICS

A. Design and/or selection and coordination of location of control devices and signs for vehicular traffic control. This includes specific sign layouts and design of supporting elements and lighting of signs.

B. Design and/or selection and coordination of location of control devices and signs for pedestrian movement on the public right-of-way throughout Washington, including a diagrammatic map showing monuments and tourist routes. This includes specific sign layouts and design and details of supporting elements and lighting of signs.

Categories A and B also include the design and location of all street painting in conjunction with vehicular and pedestrian controls.

C. Building identification and commercial sign controls and the proper layouts, sizes and locations of such signs will be specified as part of design development.

2. PAVING AND TREE LOCATION

A. Design and provide locations, patterns, typical details and outline specifications for all paving on the public right-of-way, including drains, grilles, manhole covers, curbs, stairs, ramps, walls, sidewalks, roads, and edges of planting areas other than trees.

B. Design, location, details, and outline specifications for tree pits and tree guards.

3. LIGHTING DESIGN AND LOCATION

A. The design and/or selection and location of lighting elements for the following uses including design, details and outline specifications of lighting fixtures and supports.

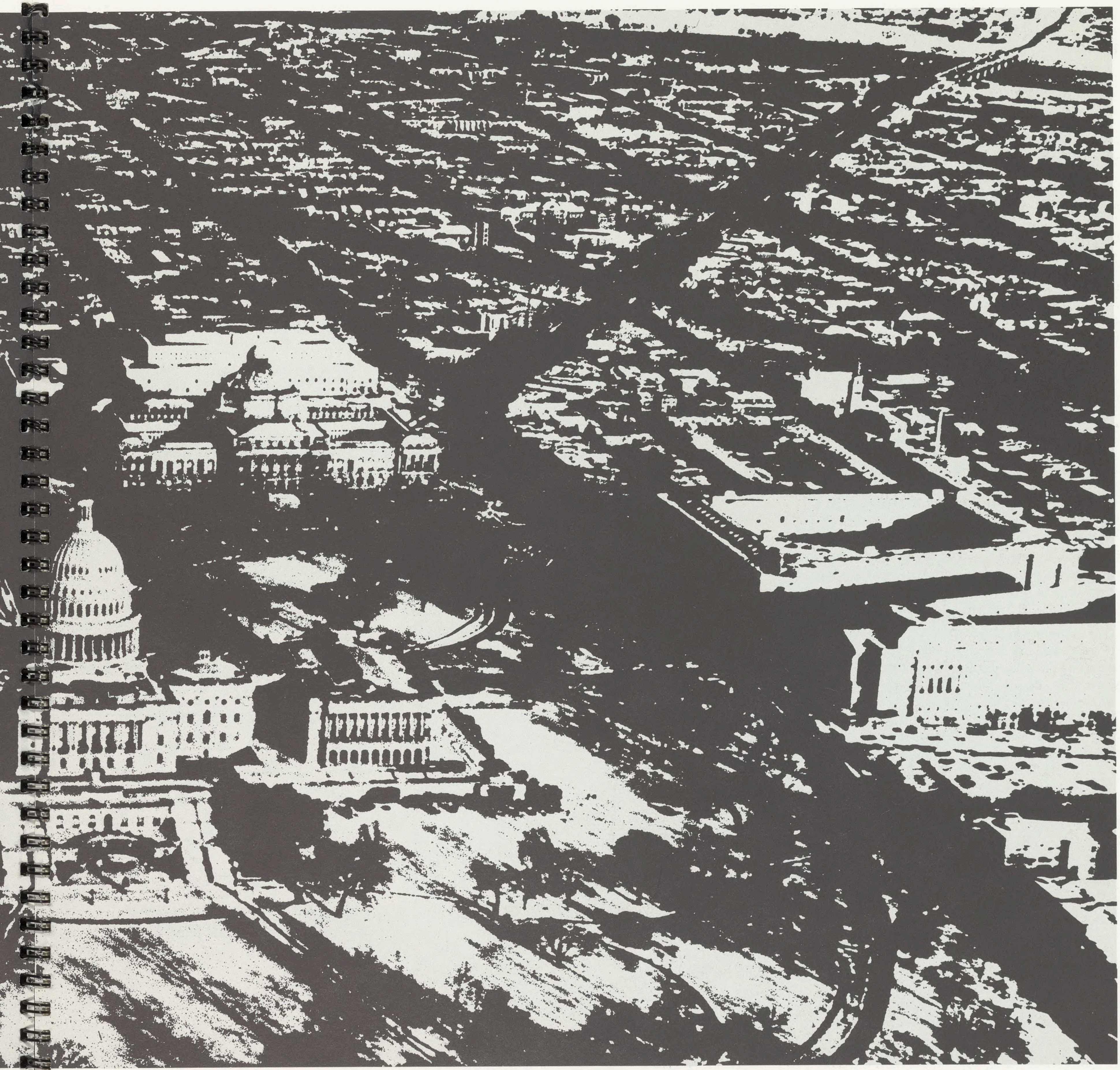
1. Street lighting and supports
2. Street lighting for pedestrians
3. Lighting to express the different street types.
4. Lighting of sitting or resting spaces.
5. Illumination of building entrances and approaches on public right-of-way.
6. Lighting of planting materials.
7. Lighting of special informational graphics at key points.
8. Development of lighting controls for building identification and commercial establishments.

4. STREET FURNITURE (This area contains elements on public right-of-way not mentioned in the above categories.)

A. The design and/or selection and location of the elements listed below including preliminary designs, details and outline specifications.

The attempt should be to coordinate the design of these elements and whenever possible a logical consolidation should result, producing fewer street elements.

1. Benches
2. Fences, walls and barriers not included in paving and tree location category.
3. Stairs and handrails not included in the paving tree location category.
4. Telephone installations
5. Trash receptacles
6. Hydrants
7. Police and fire call boxes
8. Mail boxes
9. Fountains
10. Pools
11. All other elements located in the public right-of-way shall be coordinated with the above.

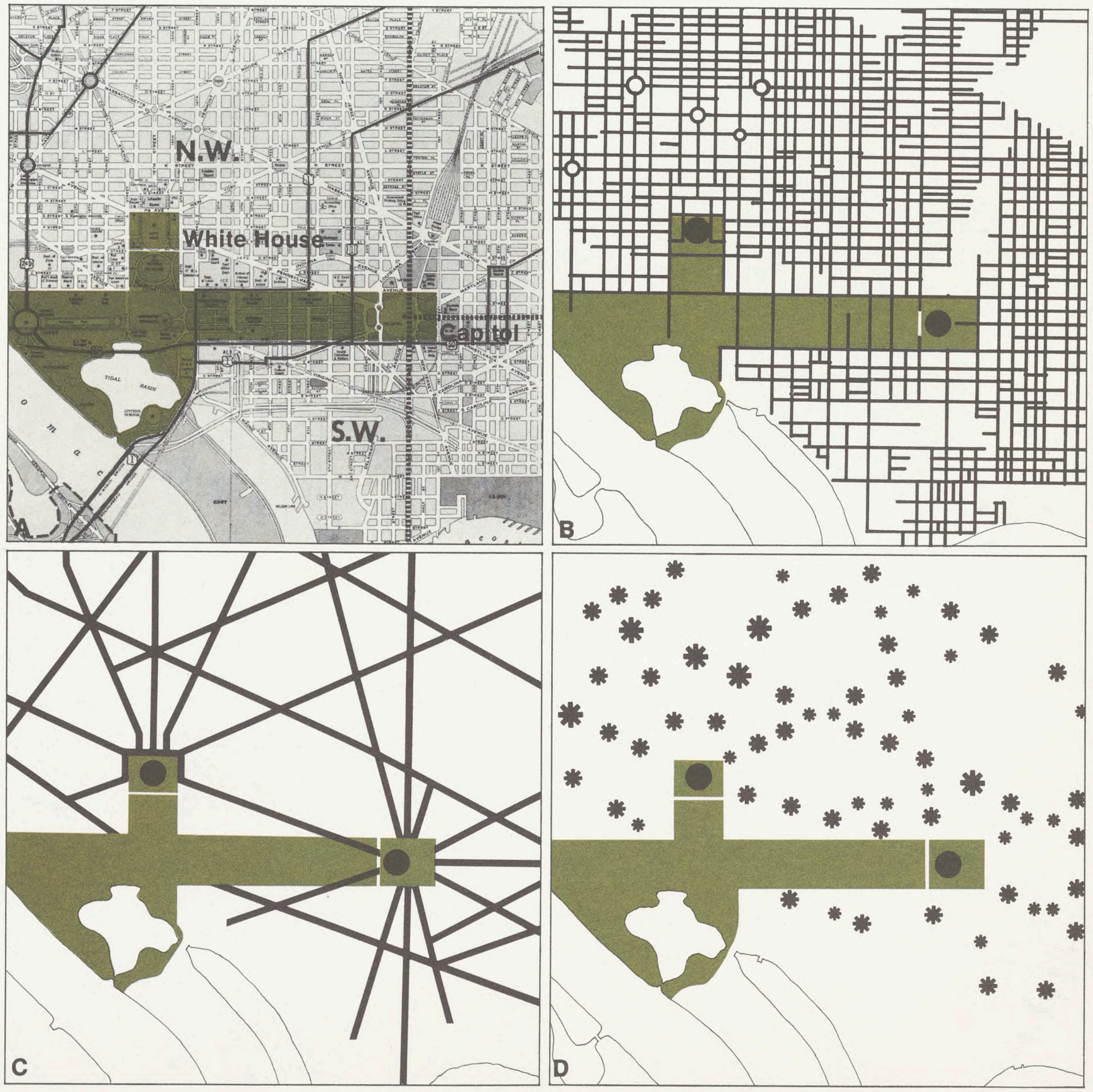


Plan Structure: Street System

An important positive asset is the clear nature of the plan of Washington. There is no doubt that the quadrant zoning with the superimposed system of grid streets and diagonal avenues of the L'Enfant Plan provides the matrix necessary for clear orientation. But this built-in clarity is never really apparent to people on the ground. There is a blurred distinction at ground level between avenues and streets, whereas the plan intended them to be clearly different.

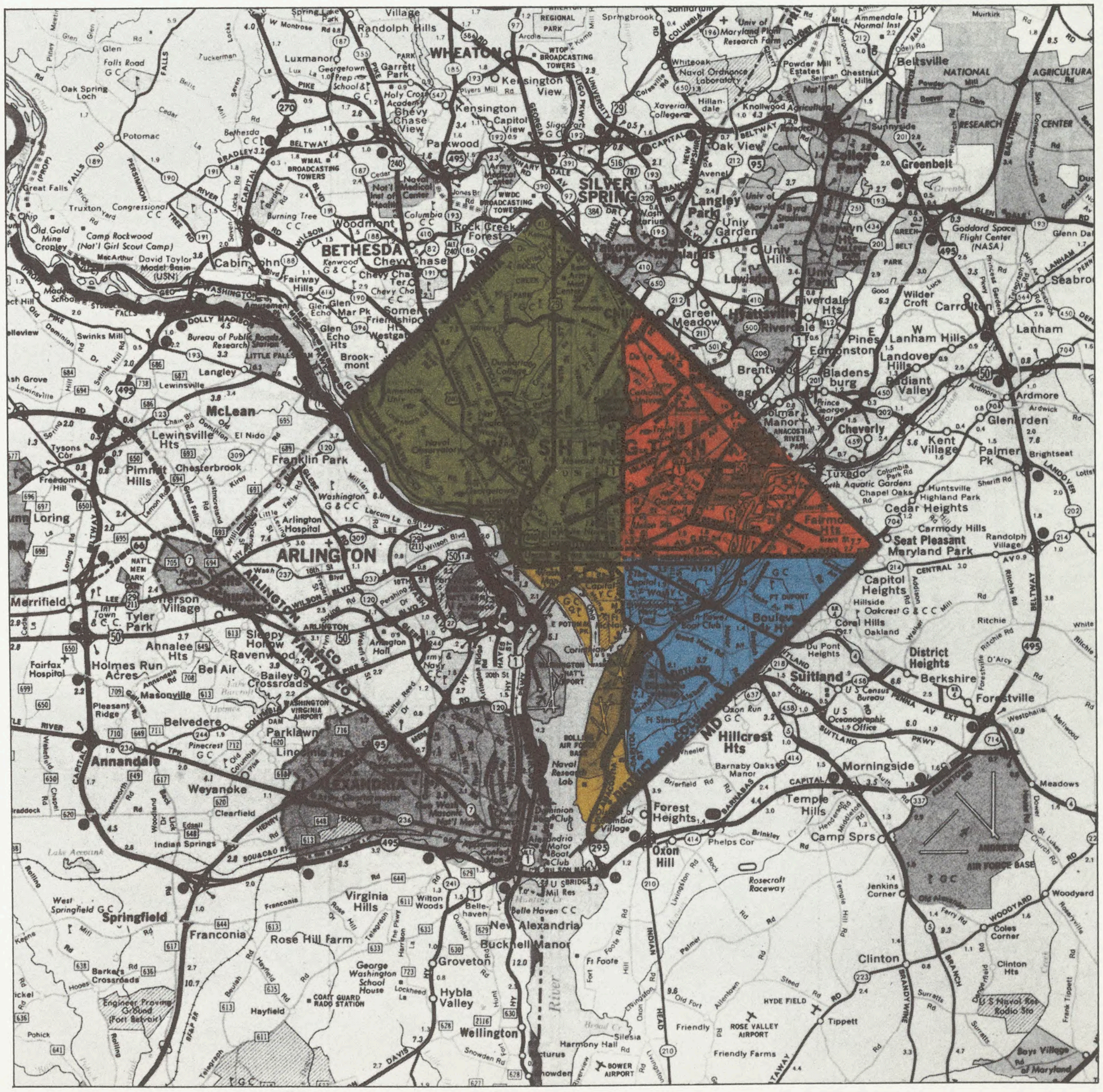
We feel that the lack of legibility in the environment is the single most important problem to be faced in the design development of the Washington environment.

Our concern was to find a means of reflecting the classical plan so that the entire city structure will become more legible to people. The plan has become neutralized by a lack of apparent priorities. This should be countered by exaggerating and contrasting the different elements of the plan so that its hierarchical structure can be felt.



A. Key Plan
B. Street Grid
C. Diagonal Avenues
D. Critical Intersections

NW | NE
SW | SE


WHEATON
SILVER SPRING
BETHESDA
Chevy Chase
Kensington
Takoma Park
Hyattsville
Riverdale
College Park
Greenbelt
Beltsville
McLean
Langley
Arlington
Alexandria
Annandale
Springfield
Franconia
Falls Church
Tysons Cor
Suitland
District Heights
Forestville
Hillcrest Hts
Oxon Hill
Temple Hills
Camp Sprs
Clinton
Andrews Air Force Base
Landover Hills
Cheverly
Capitol Heights
Seat Pleasant
Bladensburg
Lanham
Seabrook
Carrollton
Greenbelt
Lewinsville
Franklin Park
Weyanoke
New Alexandria
Groveton
Hybla Valley
Wellington
Rose Hill Farm
Virginia Hills
Morningside
Potomac
Great Falls
Glen Echo
Cabin John

Project Study Areas

We concentrated our study in three main areas:
A. a movement and intersection study of streets near Dupont Circle;
B. a reconnaissance and survey of street elements both in a shopping area, G Street between 12th Street and 14th Street, and
C. the Federal area, Constitution Avenue between 12th Street and 14th Street.

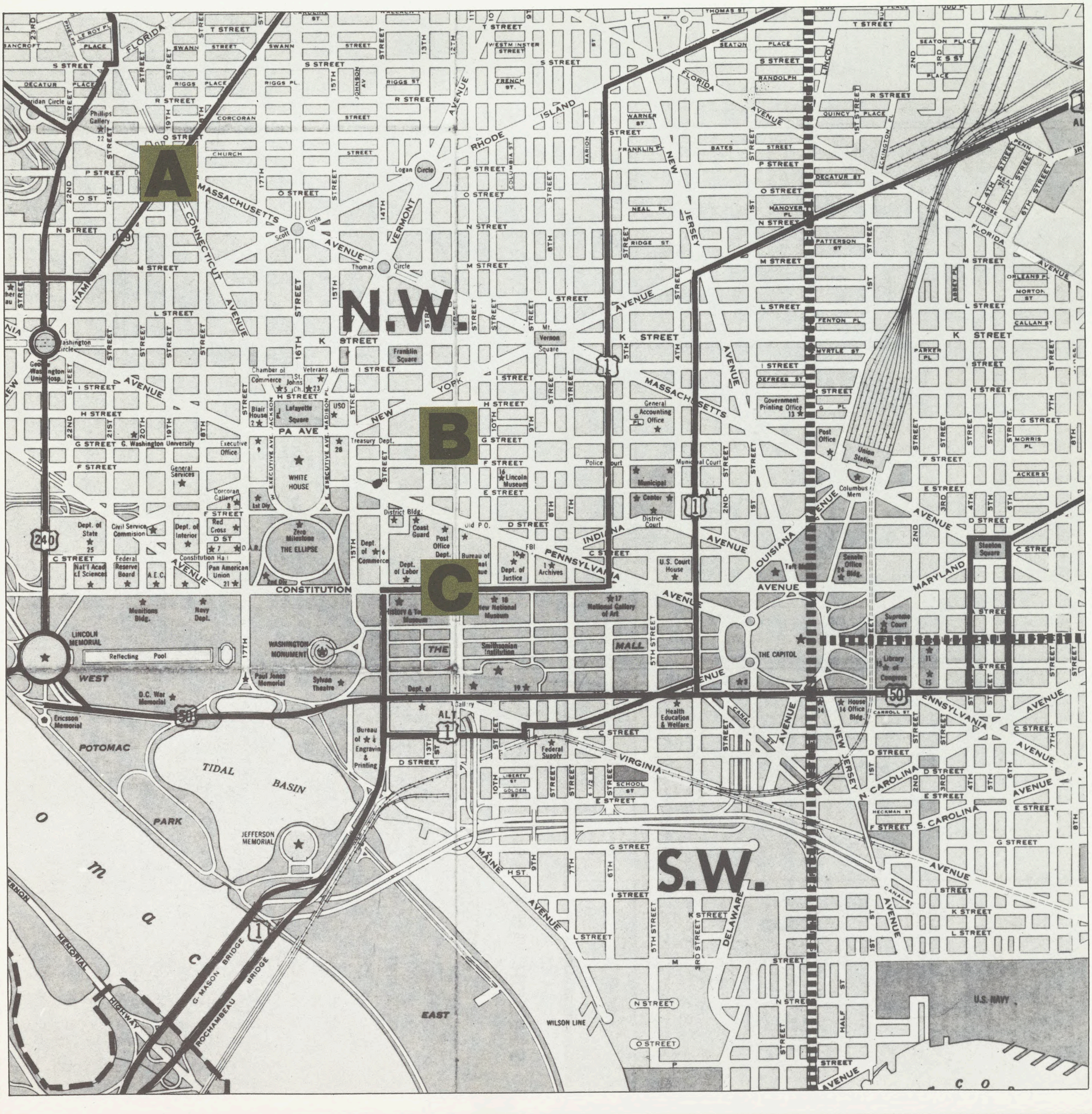
The study has been divided into two basic categories:

1

Intersections (the places where main circulation elements cross); and

2

The particular elements of the street such as signs, planting, lighting, signals, meters, mailboxes, paving, marking, etc.


A
B
C
N.W.
S.W.
Phillips Gallery
Dupont Circle
Washington Circle
George Washington Univ. Hosp.
G. Washington University
Scott Circle
Thomas Circle
Logan Circle
Franklin Square
Mt. Vernon Square
Chamber of Commerce
Veterans Admin
St. Johns Ch.
Blair House
Lafayette Square
USO
PA AVE
Executive Office
Treasury Dept.
WHITE HOUSE
General Services
Corcoran Gallery
1st Div
Dept. of State
Civil Service Commision
Dept. of Interior
Red Cross
D.A.R.
Zero Milestone
THE ELLIPSE
Nat'l Acad. of Sciences
Federal Reserve Board
A.E.C.
Pan American Union
Constitution Hall
2nd Div
District Bldg.
Coast Guard
Post Office Dept.
Dept. of Commerce
Dept. of Labor
Bureau of Internal Revenue
Old P.O.
FBI
Dept. of Justice
Archives
Lincoln Museum
Police Court
Municipal Court
Municipal Center
District Court
General Accounting Office
Government Printing Office
Post Office
Union Station
Columbus Mem.
U.S. Court House
Taft Mem.
Senate Office Bldg.
Stanton Square
Supreme Court
THE CAPITOL
Library of Congress
House Office Bldg.
Health Education & Welfare
Federal Supply
Munitions Bldg.
Navy Dept.
LINCOLN MEMORIAL
Reflecting Pool
WASHINGTON MONUMENT
Paul Jones Memorial
Sylvan Theatre
History & Tech. Museum
New National Museum
National Gallery of Art
Smithsonian Institution
THE MALL
D.C. War Memorial
Ericsson Memorial
Bureau of Engraving & Printing
TIDAL BASIN
JEFFERSON MEMORIAL
WEST POTOMAC PARK
EAST
Potomac
U.S. NAVY
WILSON LINE
G. MASON BRIDGE
ROCHAMBEAU BRIDGE
MEMORIAL HIGHWAY
29
240
50
1
ALT. 1
CONSTITUTION
MASSACHUSETTS AVENUE
CONNECTICUT AVENUE
RHODE ISLAND AVENUE
VERMONT AVENUE
NEW YORK AVENUE
PENNSYLVANIA AVENUE
INDIANA AVENUE
LOUISIANA AVENUE
MARYLAND AVENUE
VIRGINIA AVENUE
NEW JERSEY AVENUE
DELAWARE AVENUE
MAINE AVENUE
FLORIDA AVENUE
N. CAROLINA AVENUE
S. CAROLINA AVENUE
NEW HAMPSHIRE AVENUE
T STREET
S STREET
R STREET
Q STREET
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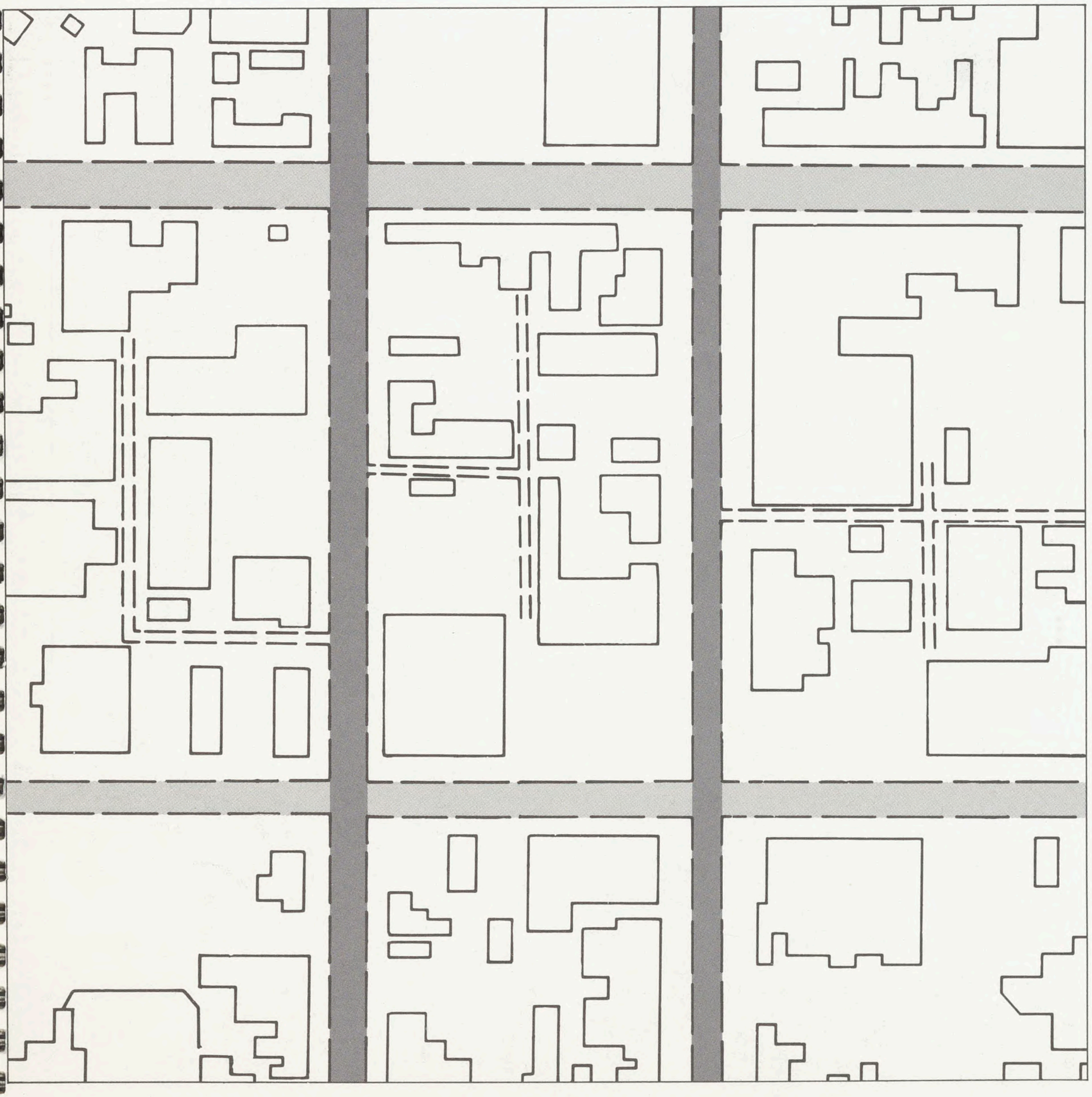
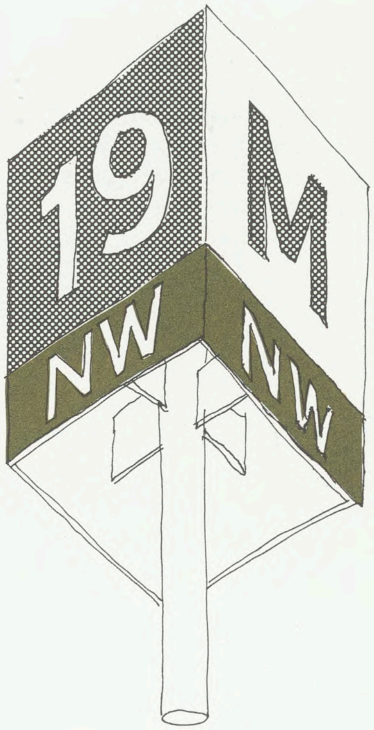
4TH
3RD STREET
2ND
1ST
17TH
18TH
19TH
20TH
21ST
22ND
23RD
CANAL ST
HALF ST
SCHOOL ST
LIBERTY ST
GOLDEN ST
4 1/2 ST

1

Grid Intersections

The meeting of the numbered and lettered streets is the most common Washington intersection. A clear coding of the street signs should be developed to help distinguish between the numbered and lettered streets and also to identify the quadrants by using a color code for the various sectors.

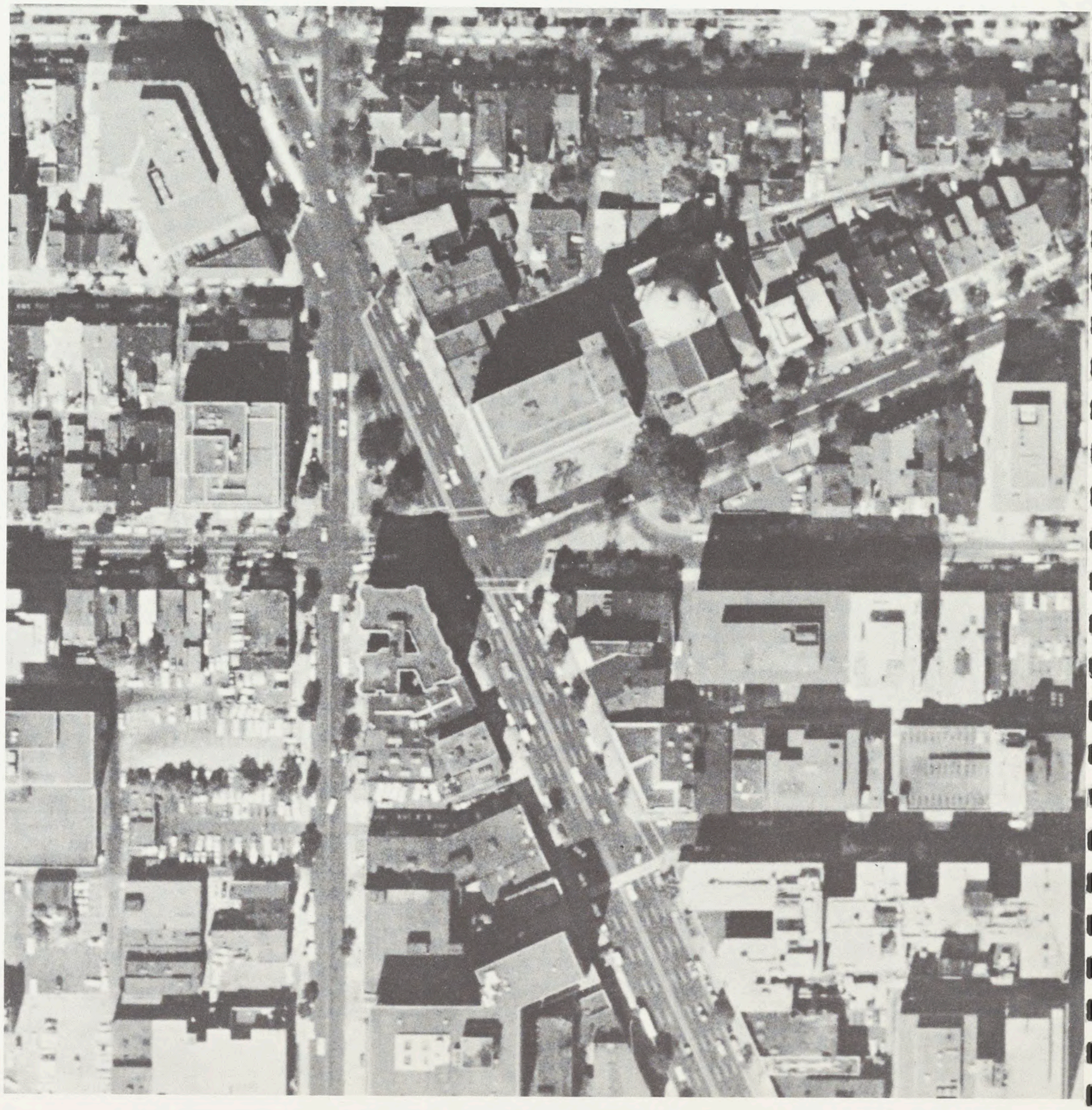


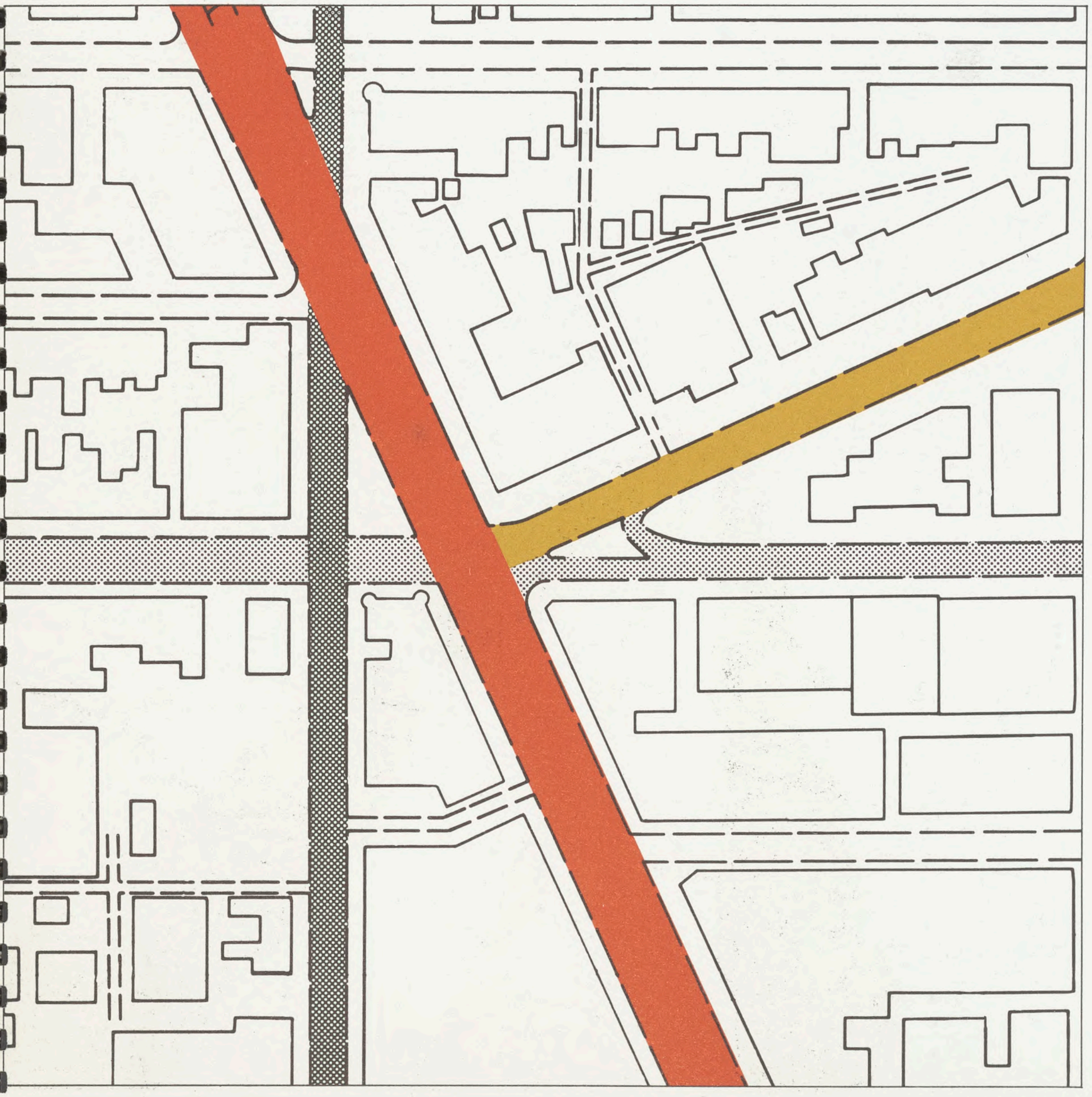

19
M
NW
NW

1

Avenue-Street Intersections

The intersection of the avenues with the street grid is the situation where the uniquely different elements of the plan come together. The essential difference of these elements must be determined and used as the basis for future design priorities. The most important elements (avenues) should receive an appropriate design expression.

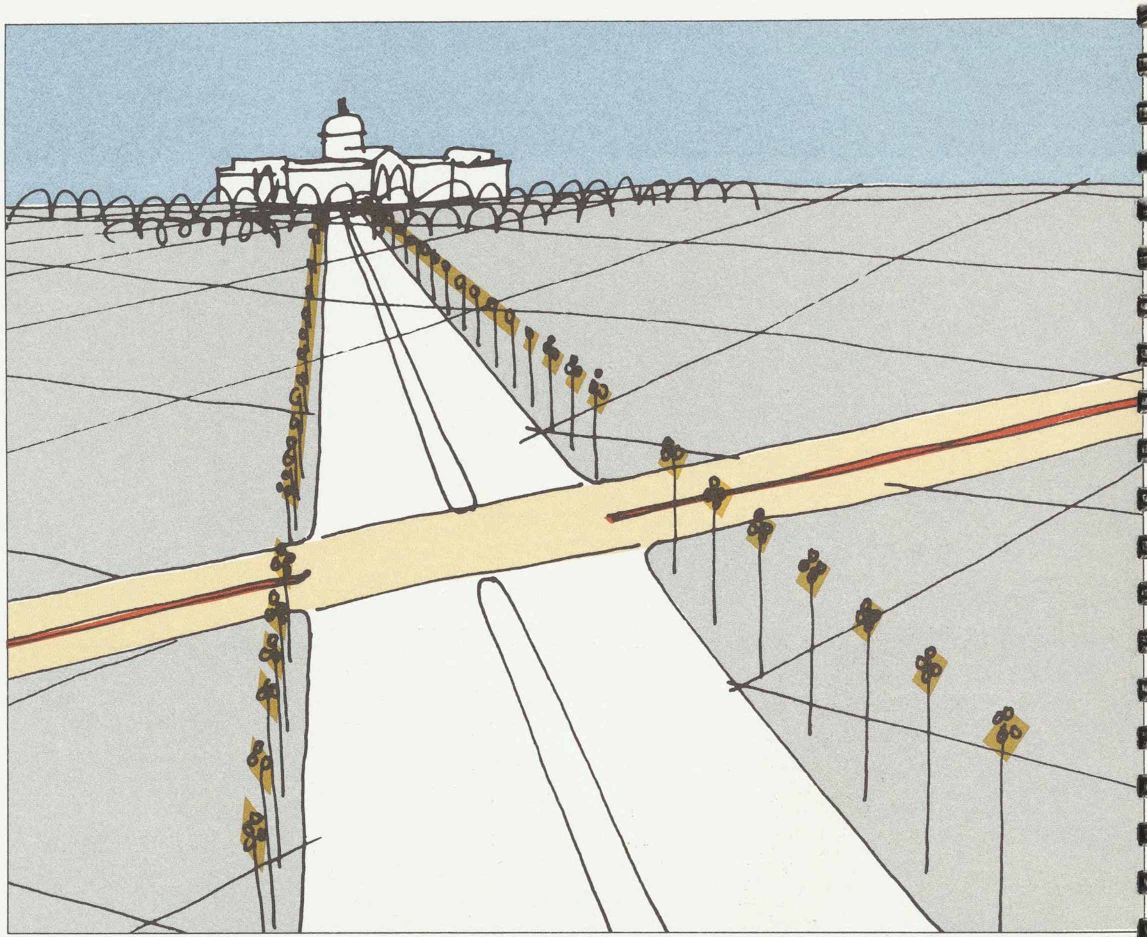


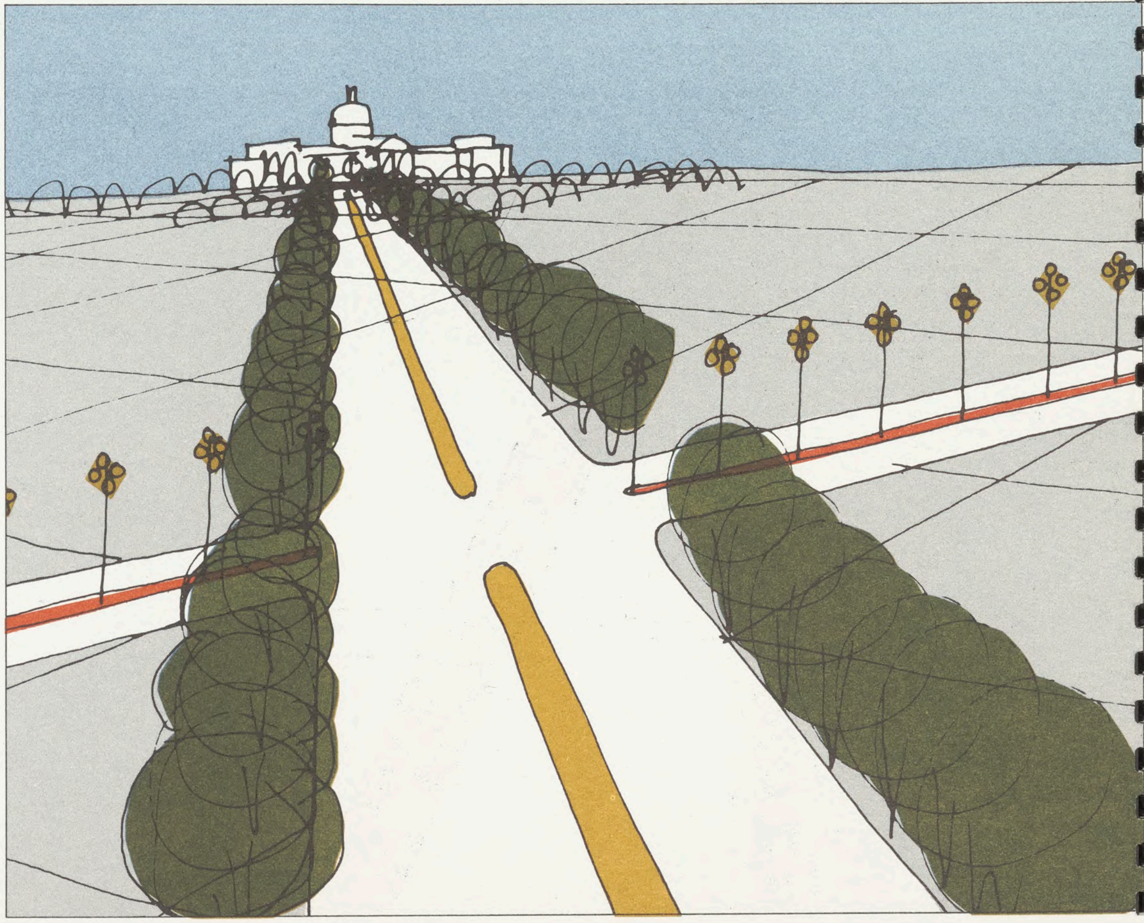


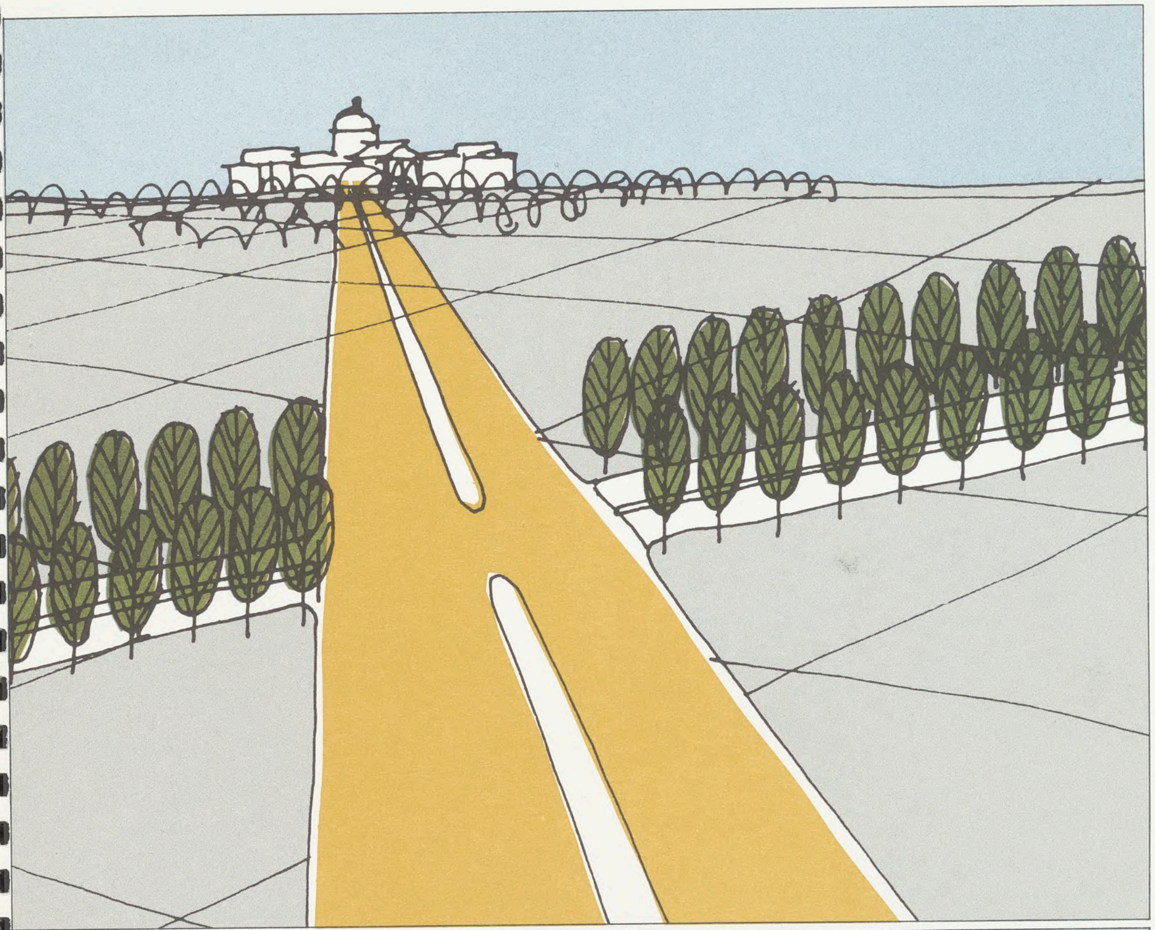
1

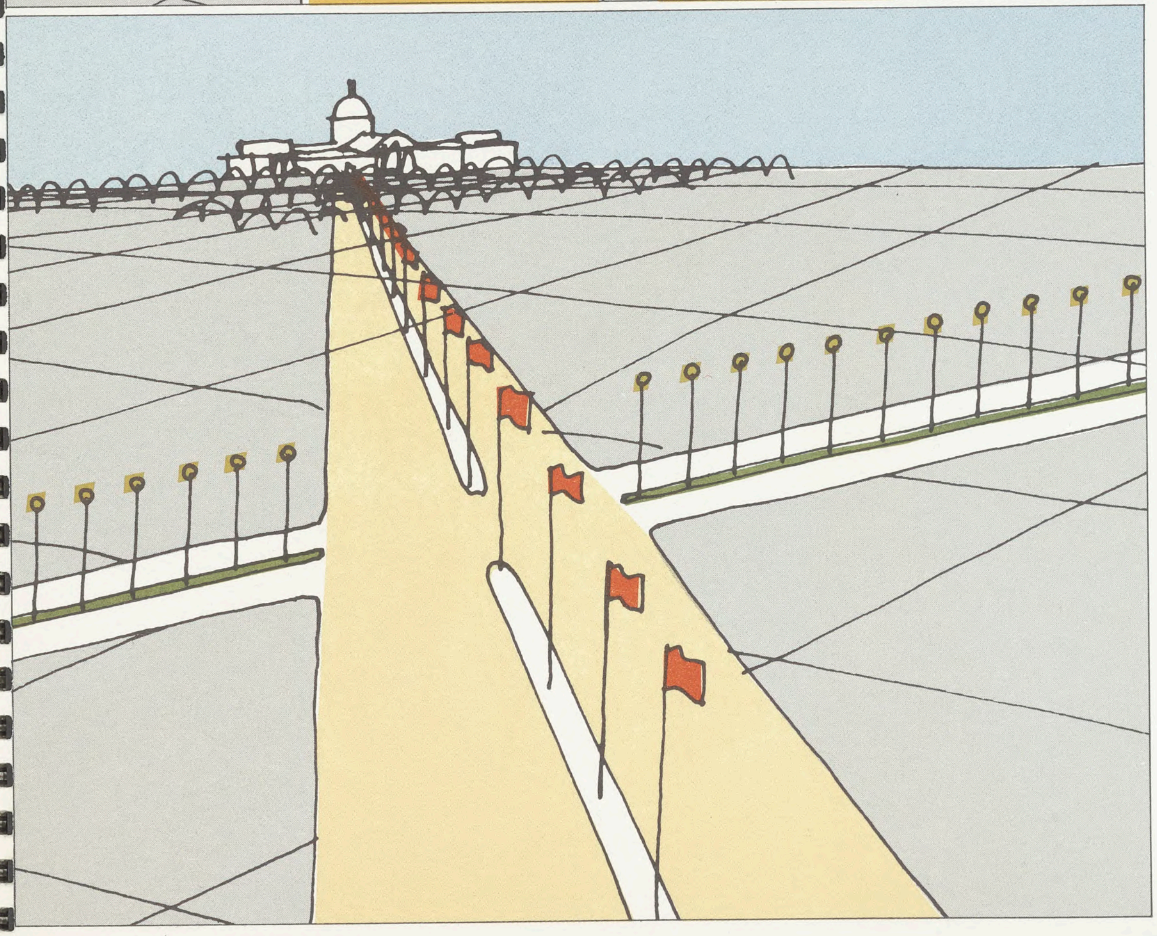
Design Opportunity: Avenue Intersections

Several possible devices for reflecting the different avenues at intersections are illustrated. Combinations of planting, special paving, flags and lights are possible. The possibilities are manifold with the important consideration being to develop clearly recognizable differences.







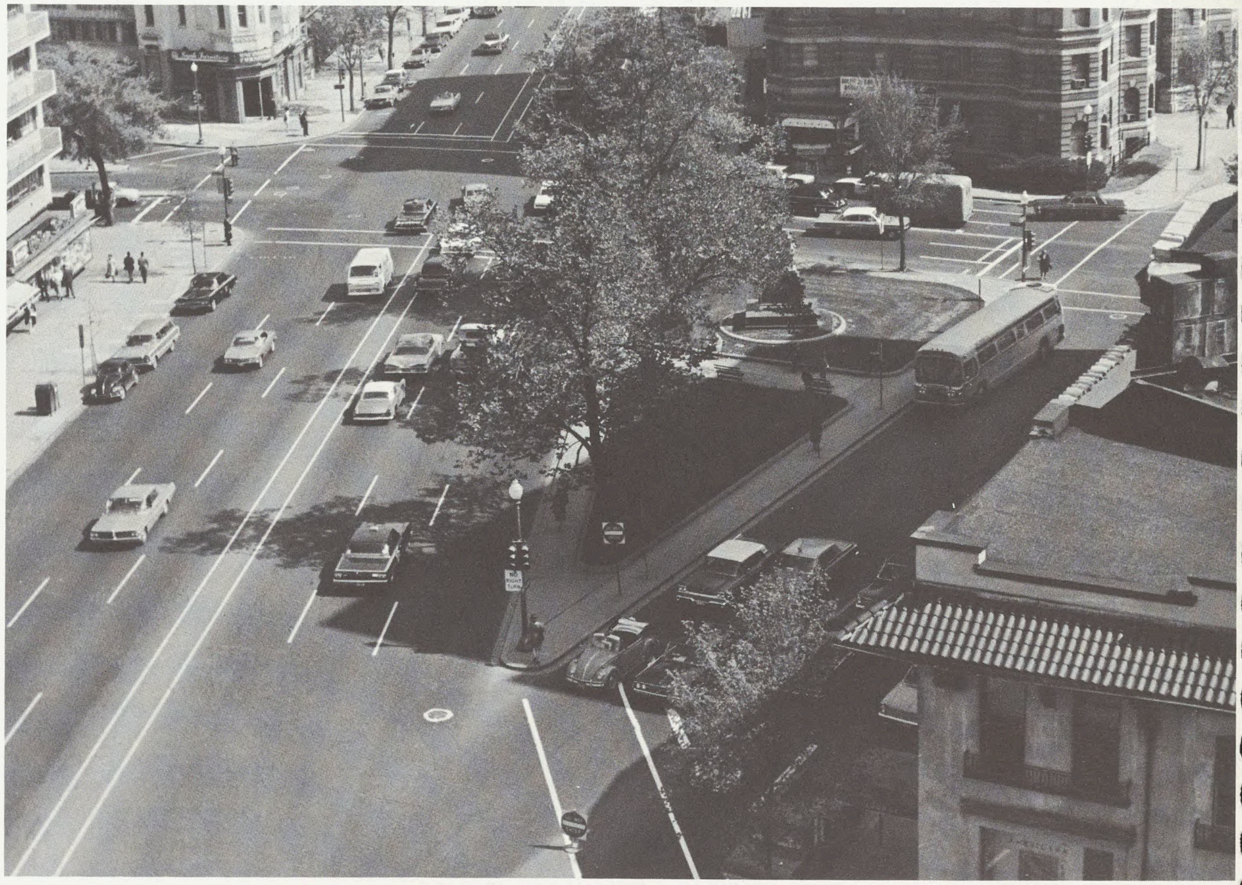


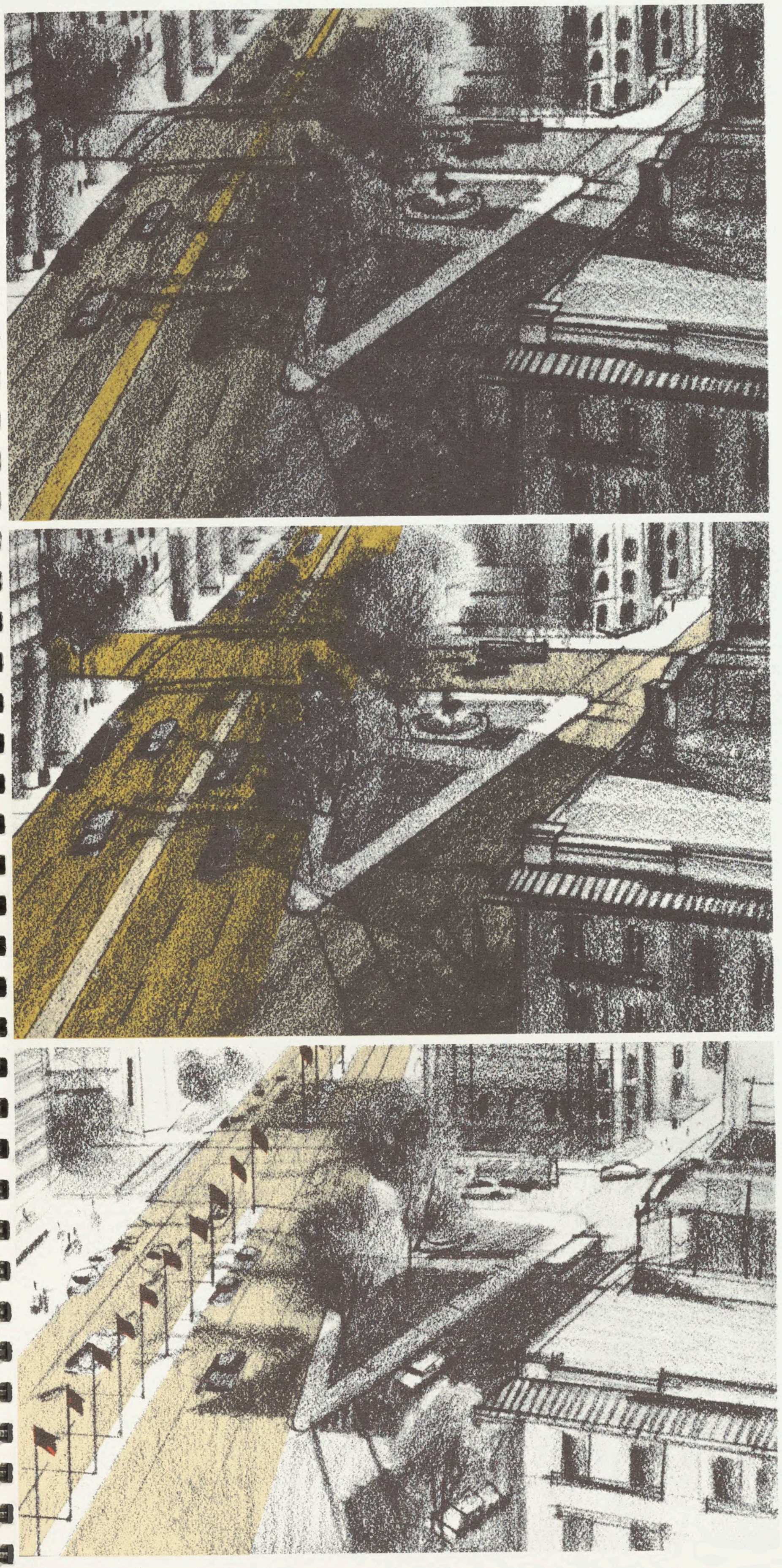
1

Design Opportunity: Avenue-Street Intersection

Various visual and spatial devices may be employed to distinguish one street type from another. Illustrated here are three ways an avenue may become more legible in relation to the streets it intersects. A color-coded median strip or the coloring of the actual street paving can provide immediate recognition of the special street. Spatial elements such as flags symbolizing states or special lights may also be used.

We suggest that color differences be developed by choosing unit paving material such as brick or stone rather than by adding artificial coloration.

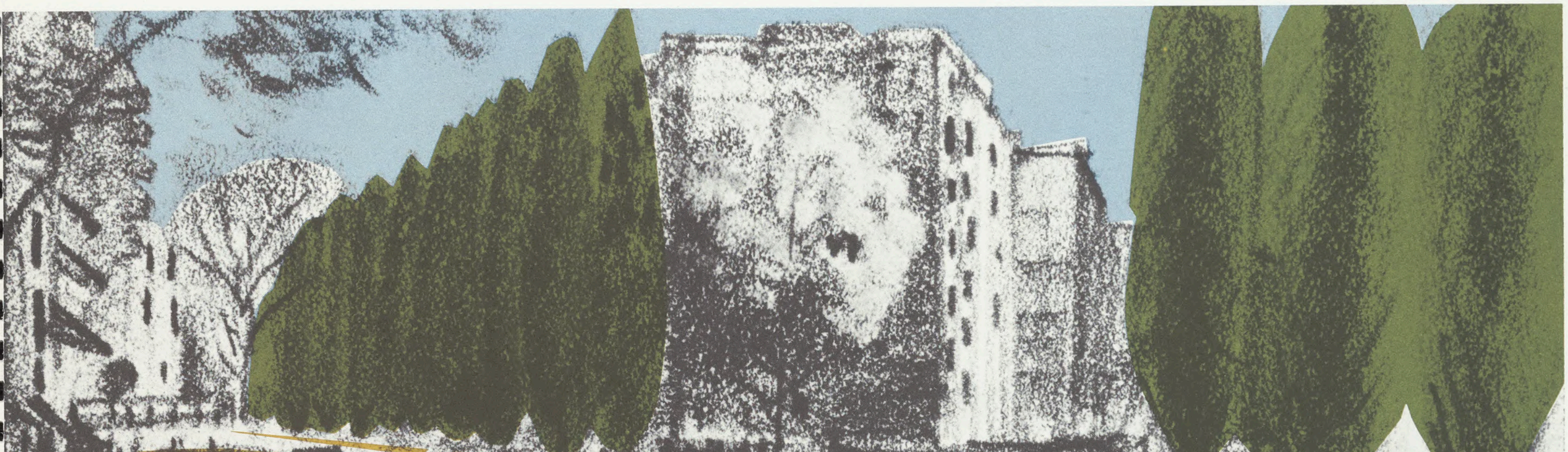




1

Design Opportunity: Avenue-Street Intersection

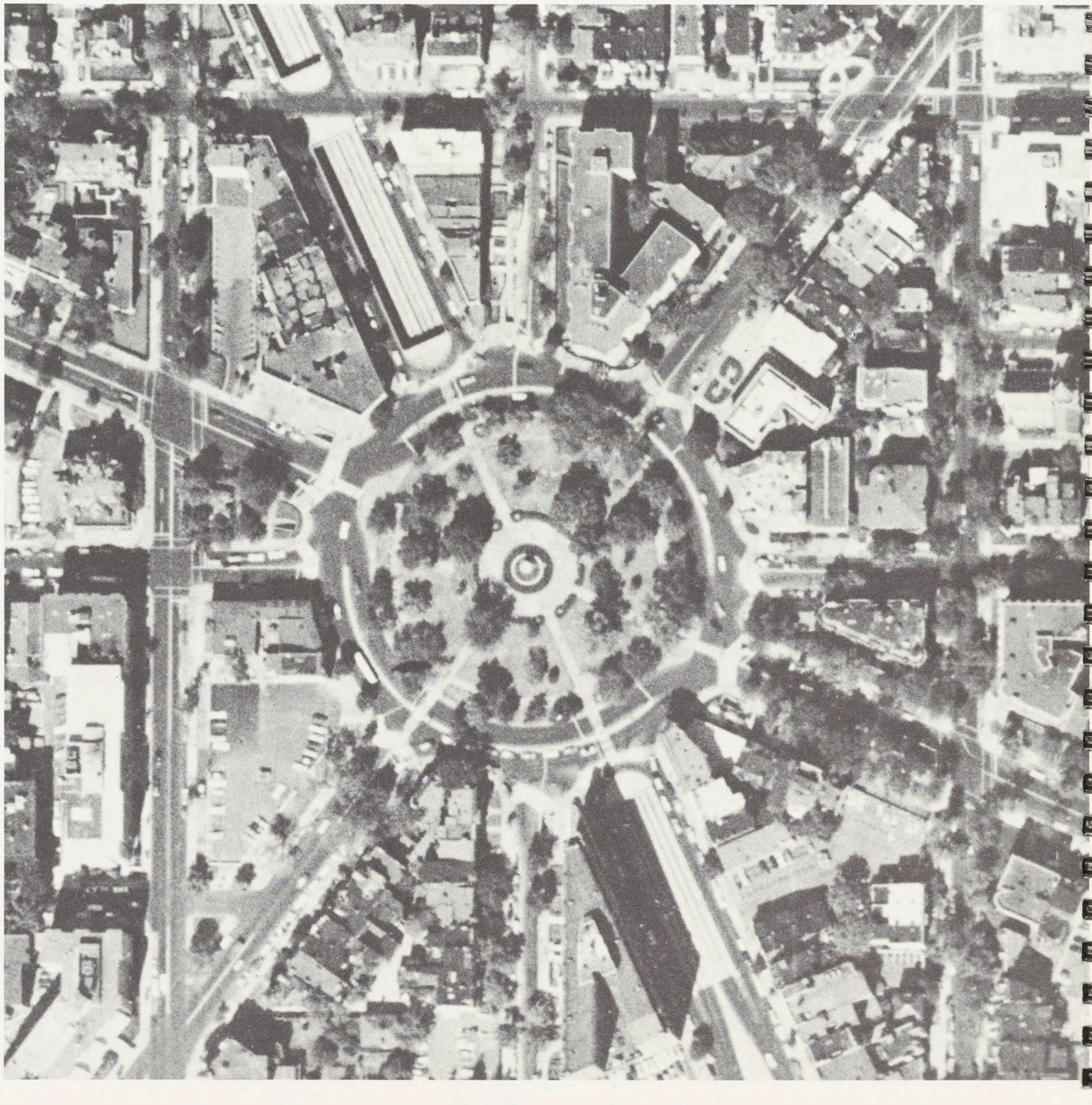
Another strong device is to utilize a special planting to differentiate the avenue from the street. If the form of planting is chosen properly, it will not only provide the important distinction, but it will also help to reinforce the existing tree-lined street character of Washington.

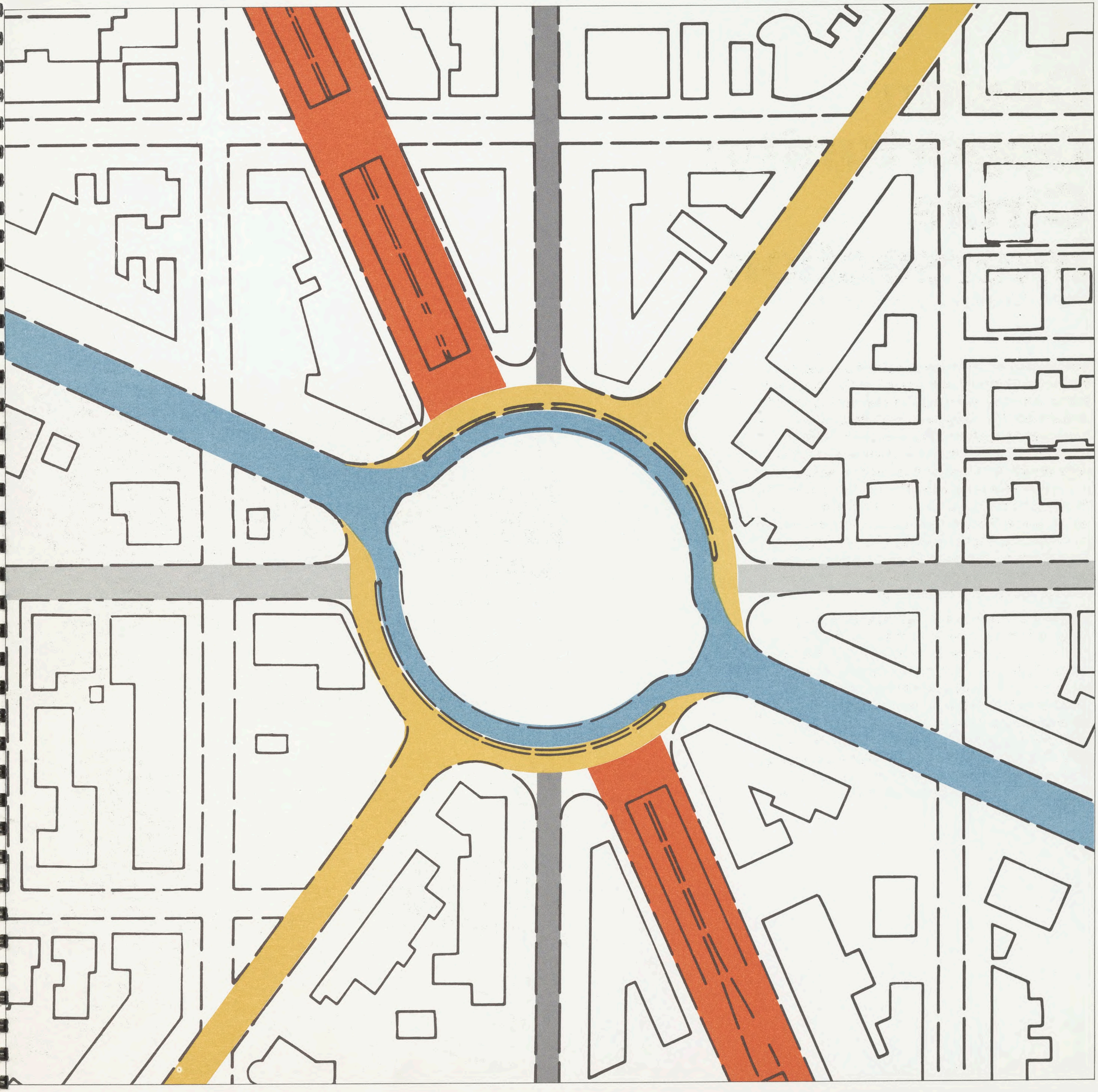


1

Circle Intersections

The typical circle intersection is a direct result of the unique plan of Washington. These circles are intended to be important focal and orientational elements and should be expressed as such. It is at this point that the most street elements intersect each other and this makes the need for the establishment of clear priorities crucial.



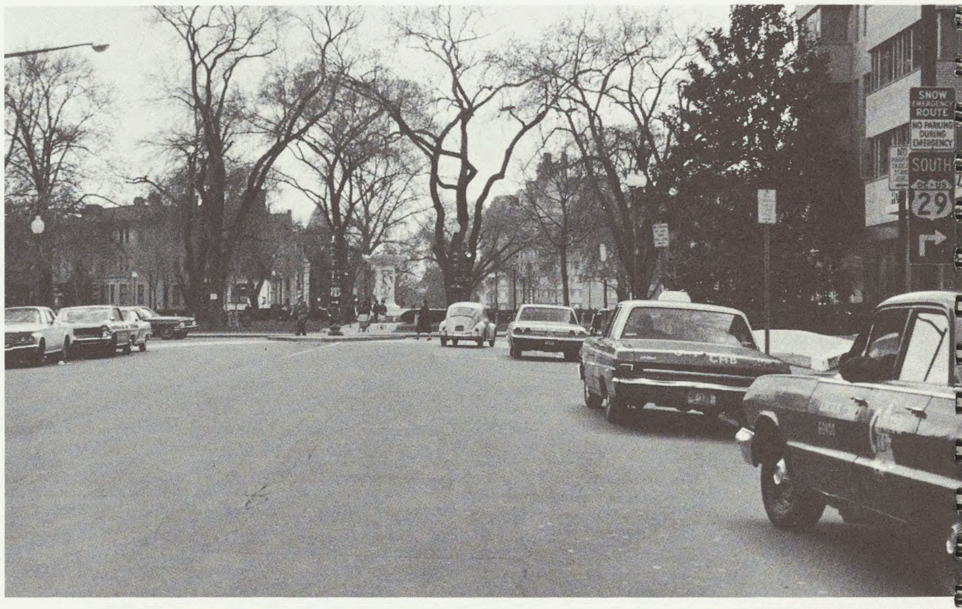


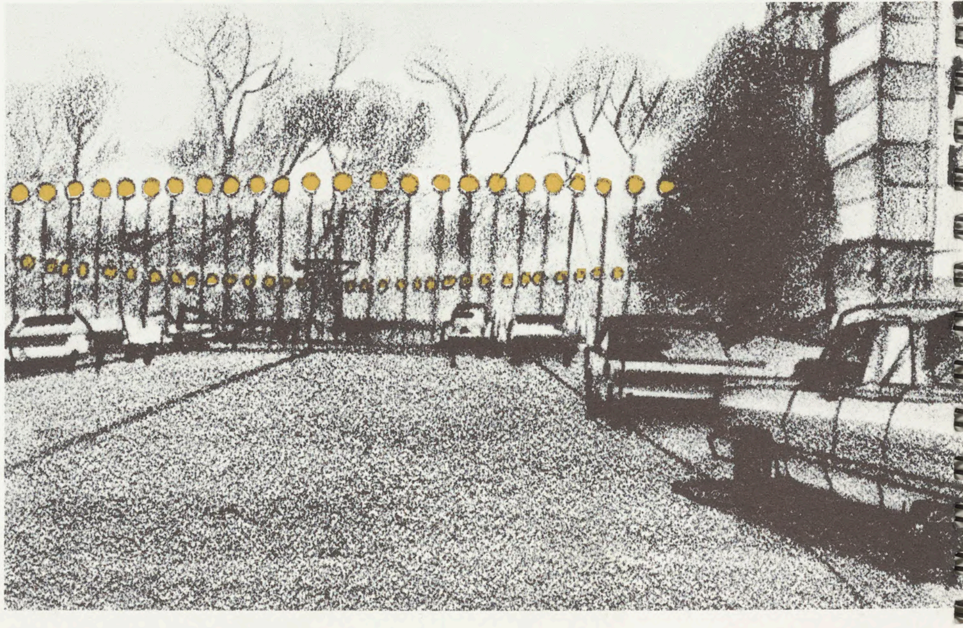
1

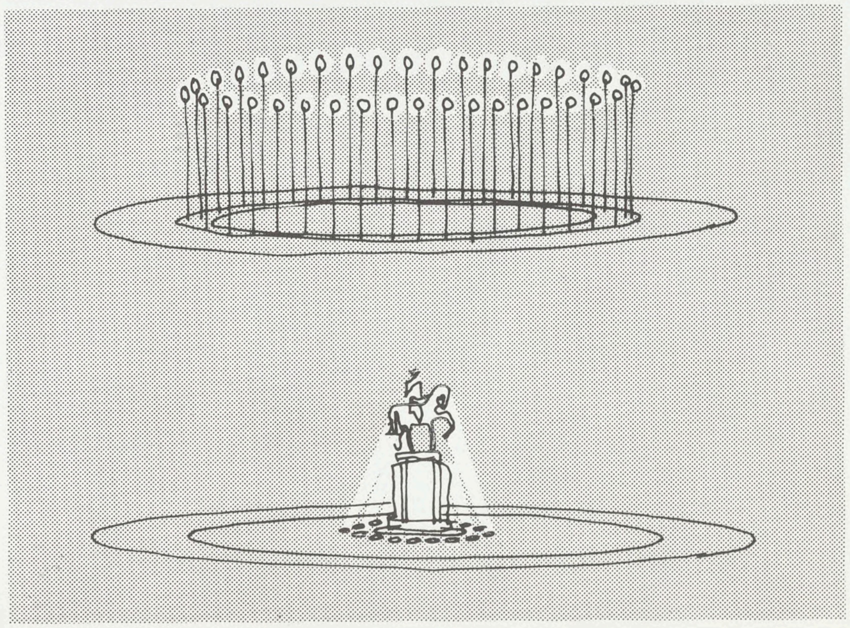
Design Opportunity: Circle Intersection

Some device has to be developed to express the actual importance of the circle. Since the monuments or fountains in the circles are of a small size it is suggested here to use a cylinder composed of closely spaced lights, to define it. This would produce a recognizable element by day and at night it would have a comparable legibility. The drawing indicates how lights may appear from a normal street view. Many other devices may be employed to produce this signal quality. It is not important that lights be the specific design elements, but it is important that a heightened expression of the circles be attained.

The city at night is a different experience, but streets at night can produce a legibility similar to the day aspect. Classified lighting can help to distinguish different kinds of streets or it may illuminate foci such as the monuments located in the circles at avenue intersections. They are now nearly invisible at night, one virtually stumbles over them when they could be strong orientational clues if they were more visible. Light can, and should, be used for identification as well as illumination.



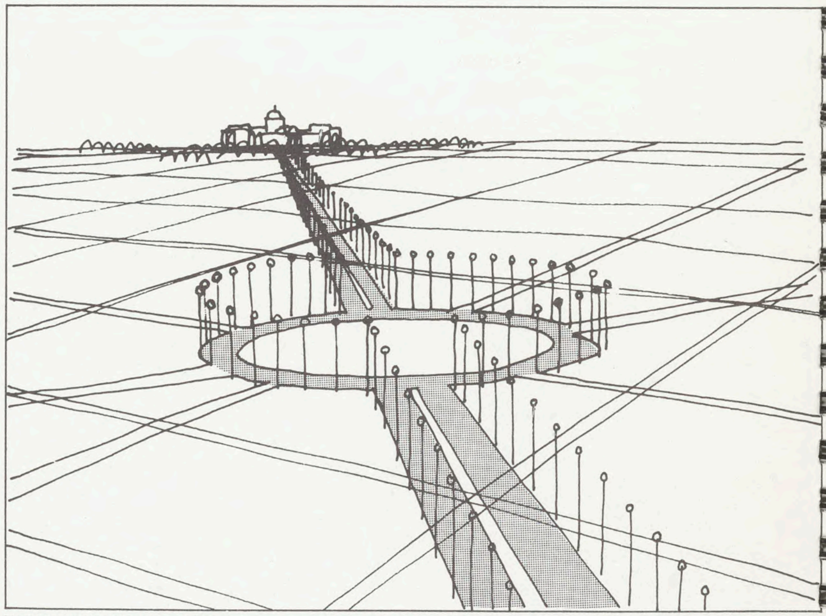


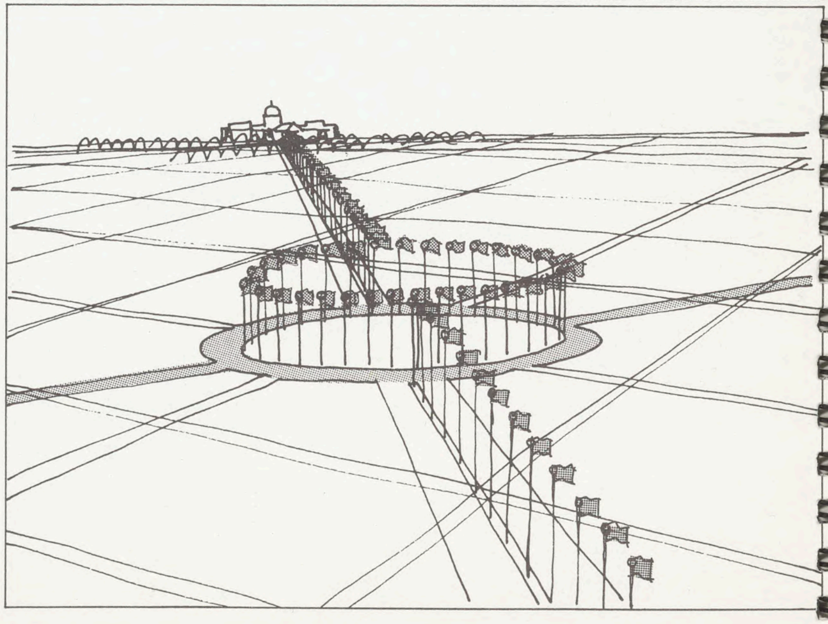


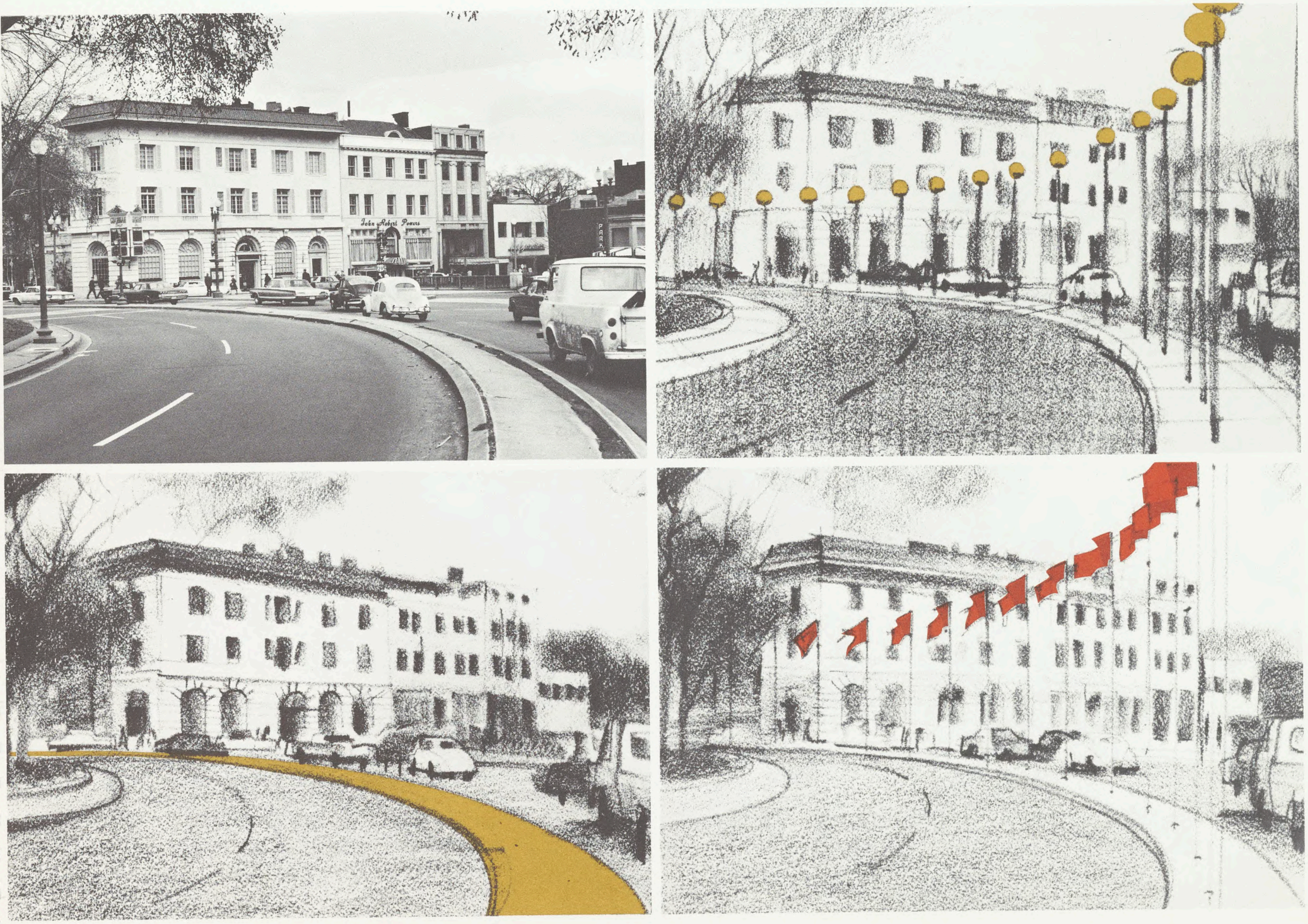
1

Design Opportunity: Circle Intersection

These drawings illustrate how the continuity of the most important streets might be expressed as a route through the circle. At the present time the clear continuation of streets is very obscure. Lights, flags, or a colored median strip can become the clues to alignment and extension.





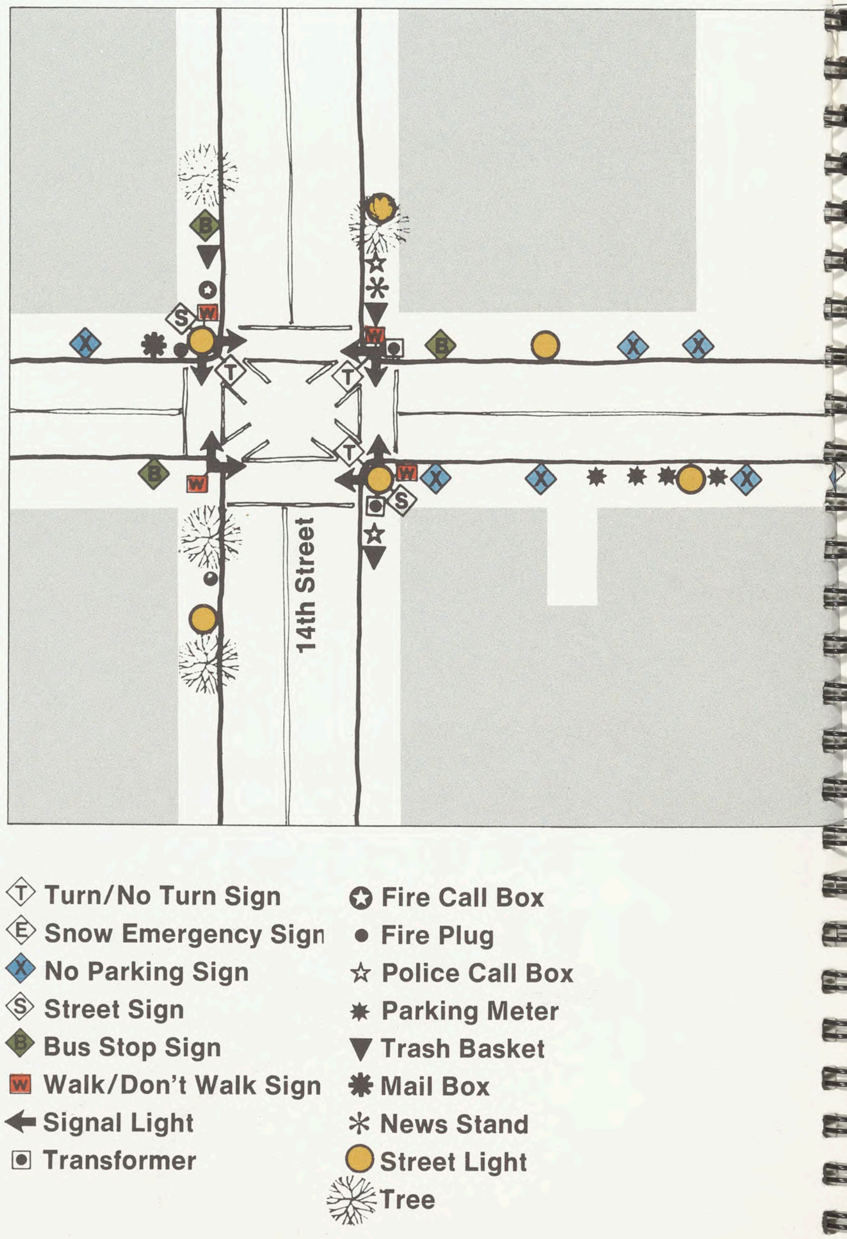

John Robert Powers
PARK

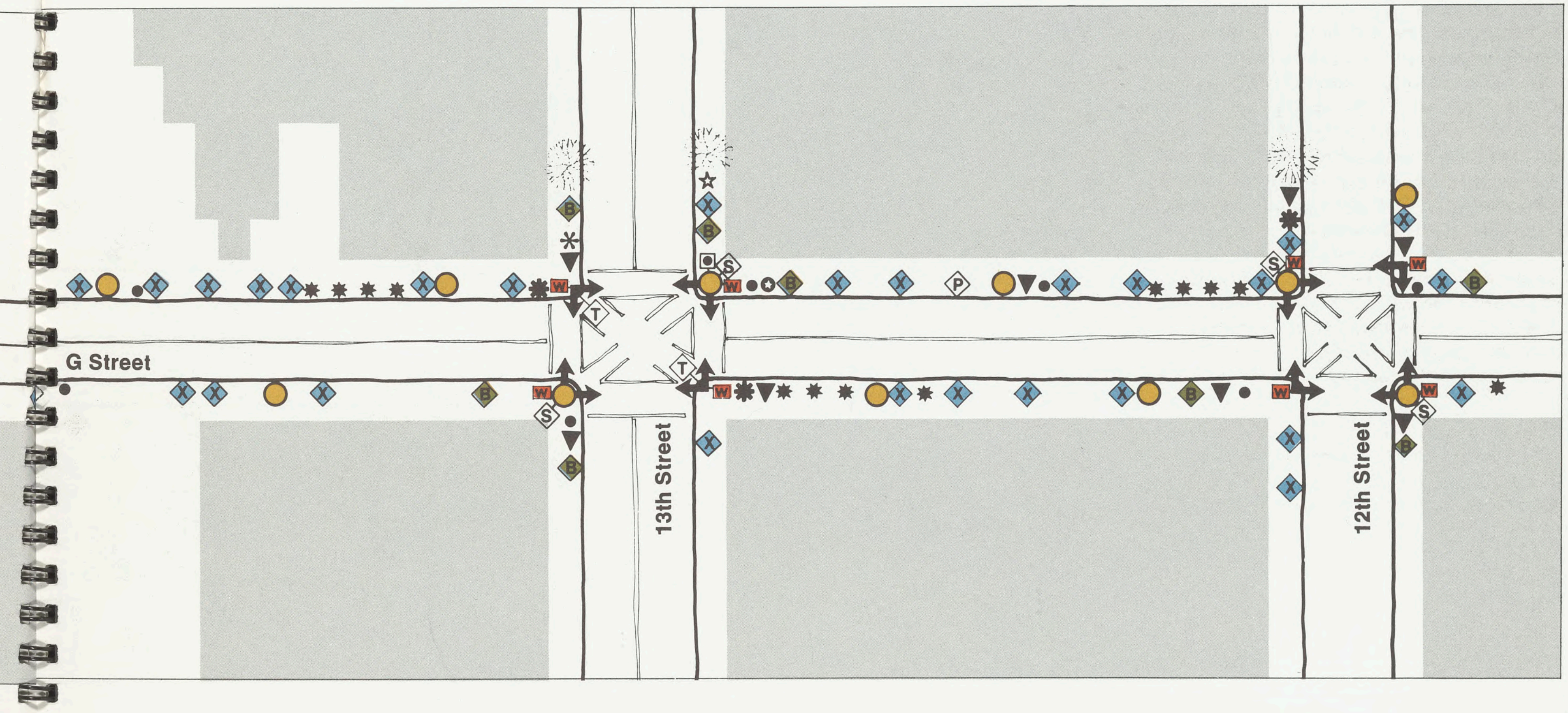
2

Street Furniture Study: Commercial Area-G Street

Streets are receptacles for all kinds of things. Most of the elements in them are located in a haphazard way and produce a cluttered environment. The problem of clutter can be attacked two ways. Elements can either be consolidated or combined thereby limiting the number of single elements on the streets, or useless and redundant elements can be eliminated. We recommend both approaches. The proliferation of elements along streets with an increase of density at intersections produces a serious physical and visual congestion. Streets receive more elements every year and rarely are any removed. This needs immediate and strong action if the streets are to be places for people rather than junk.

G. Street was chosen as a study area because it is typical of a high intensity shopping area. The density of public and private street elements is generally greatest in this type of area.

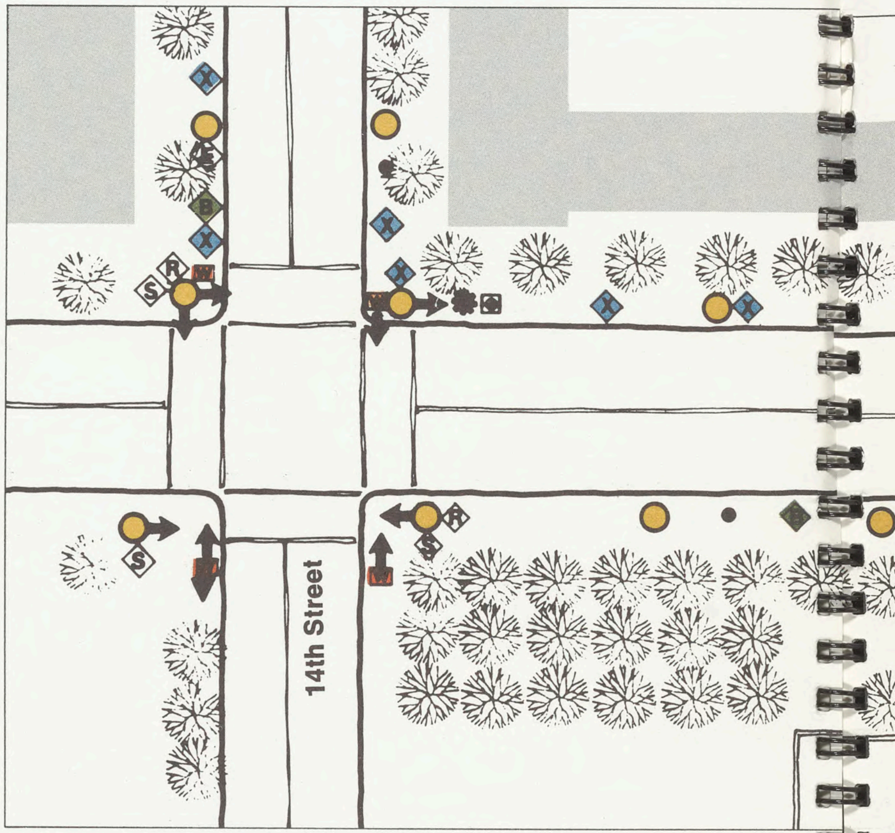



G Street
13th Street
12th Street

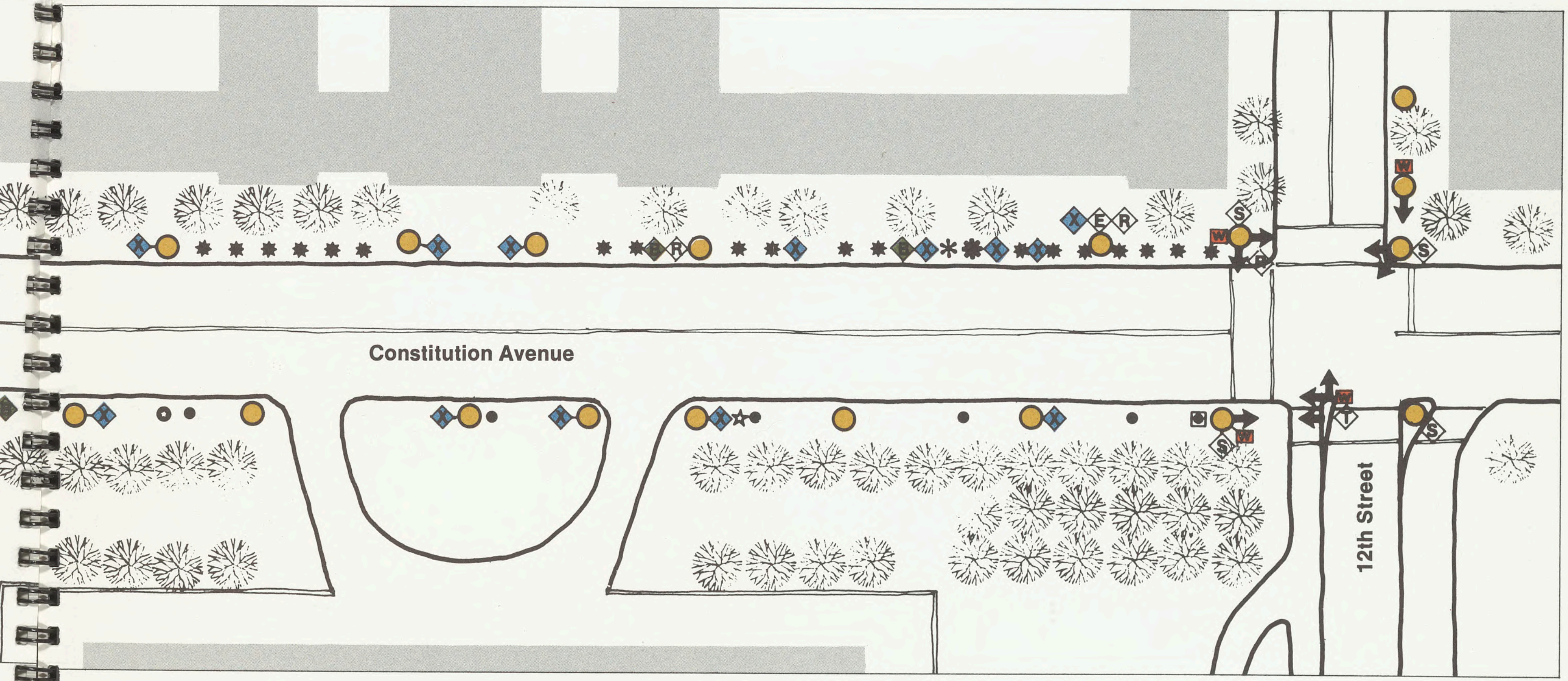
2

Street Furniture Study: Federal Area Constitution Ave.

All streets reflect the proliferation of signs and elements. The number and type of public elements found in the Federal area are similar to those found in the commercial areas of the city. This kind of area, of course, does not have the density of private commercial signs typical of shopping areas. It is not only the number of elements, but their lack of coordination and relationship to each other that results in visual chaos.



- T Turn/No Turn Sign
- E Snow Emergency Sign
- X No Parking Sign
- S Street Sign
- B Bus Stop Sign
- W Walk/Don't Walk Sign
- ← Signal Light
- ▣ Transformer
- ✪ Fire Call Box
- ● Fire Plug
- ☆ Police Call Box
- ✸ Parking Meter
- ▼ Trash Basket
- ✱ Mail Box
- ✻ News Stand
- 🟡 Street Light
- ✳ Tree


Constitution Avenue
12th Street

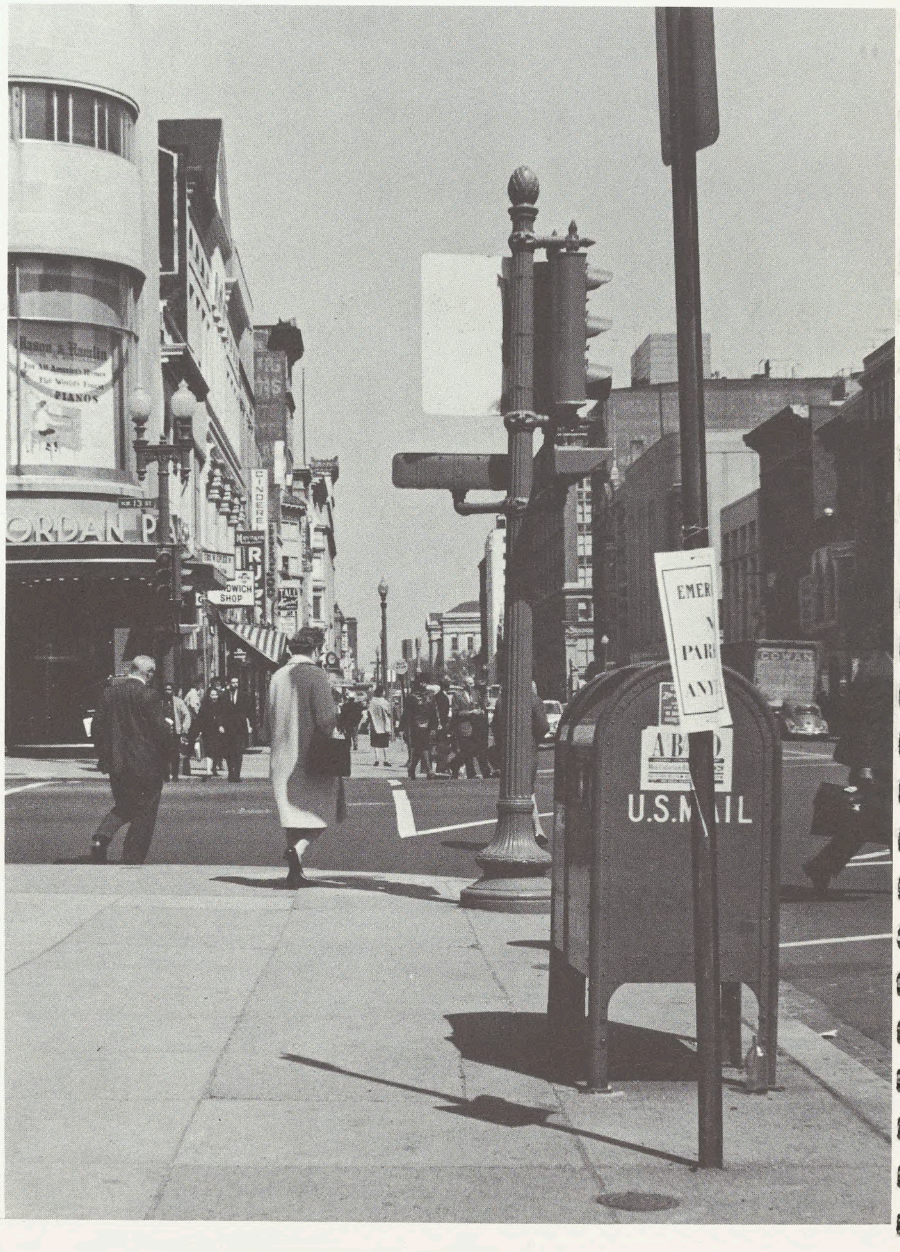
2

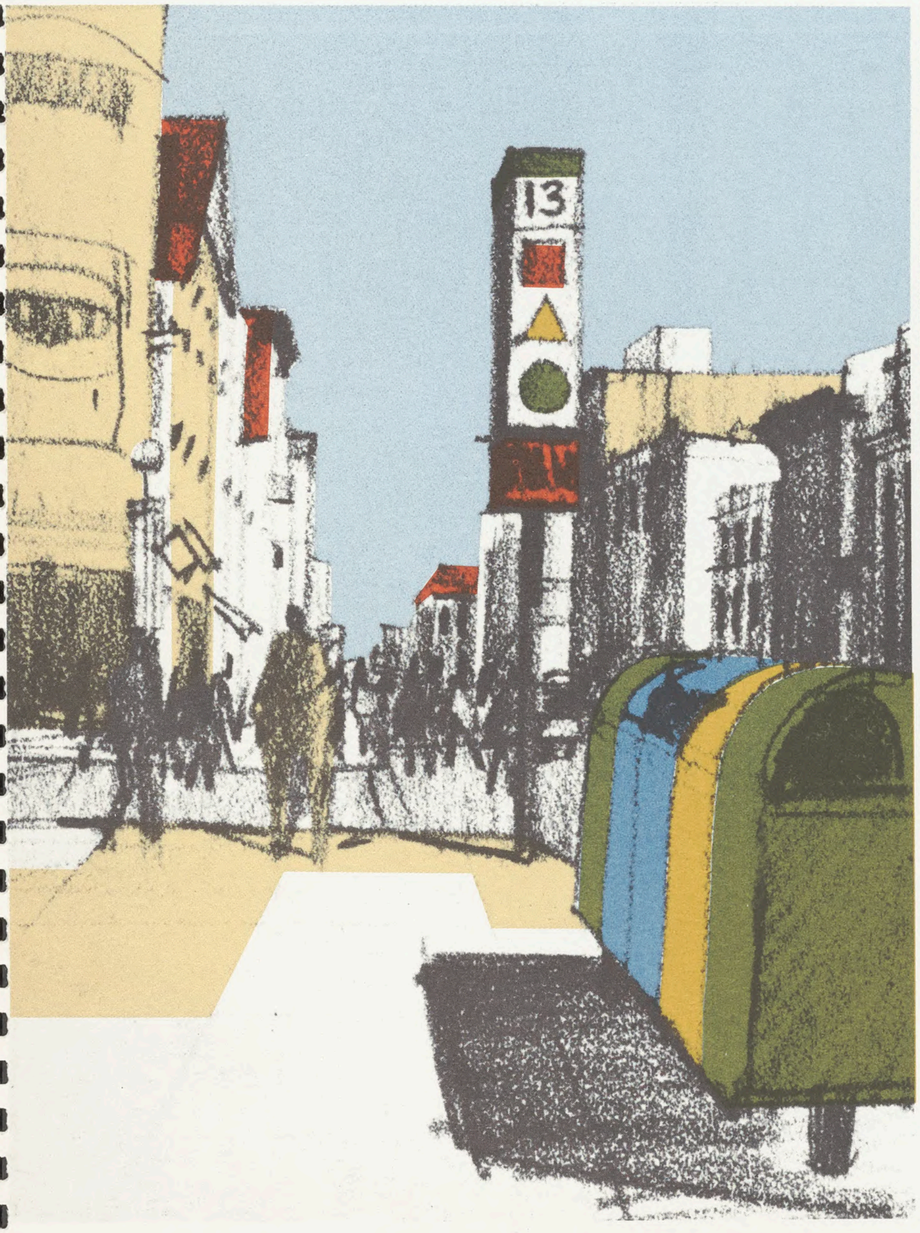
Design Opportunity: Consolidation of Street Elements

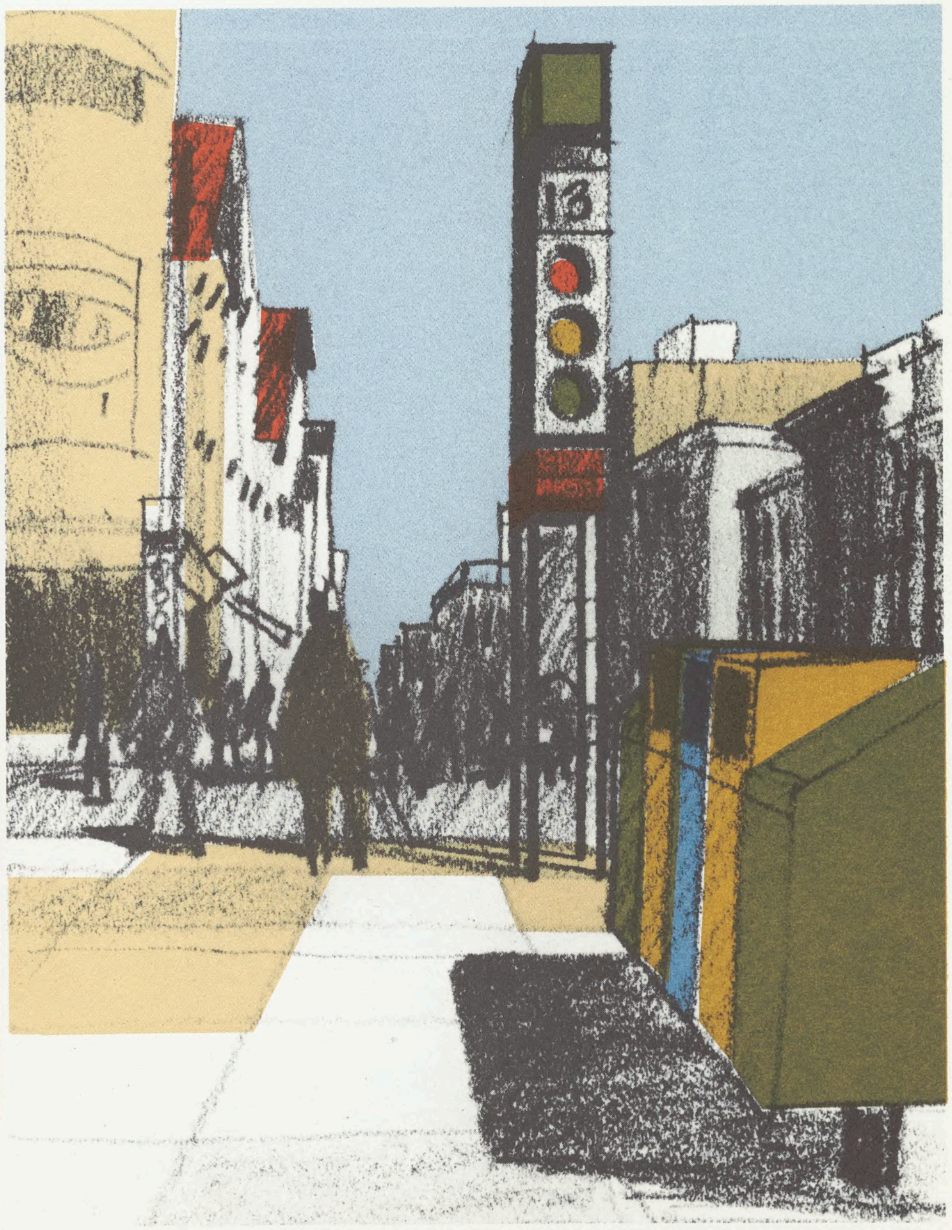
The street should be an elegant background for the life of the city. The key here is the word background. One should not be aware of all the elements all of the time. Much of the congestion is produced by the ever-present competition of elements and information. This competition becomes so active that nothing is recognizable. This anarchy of street elements must be resolved into a total street design with the elements reflecting clear functional and visual priorities.

This array of elements on the street corner is typical of the entire city. The problem is to minimize clutter and maximize freedom of movement in these areas.

An attempt should be made to design the street corner as a unified place. One approach is to design a simple vertical signal element, containing traffic signals, light, street identification and other elements. This can then be related to a lower element which would consolidate elements like mail boxes, trash receptacles, newspaper vending machines, etc. The result would be that only two major elements would have to be located on each street corner. This consolidation would do much for organizing the environment of the intersection.



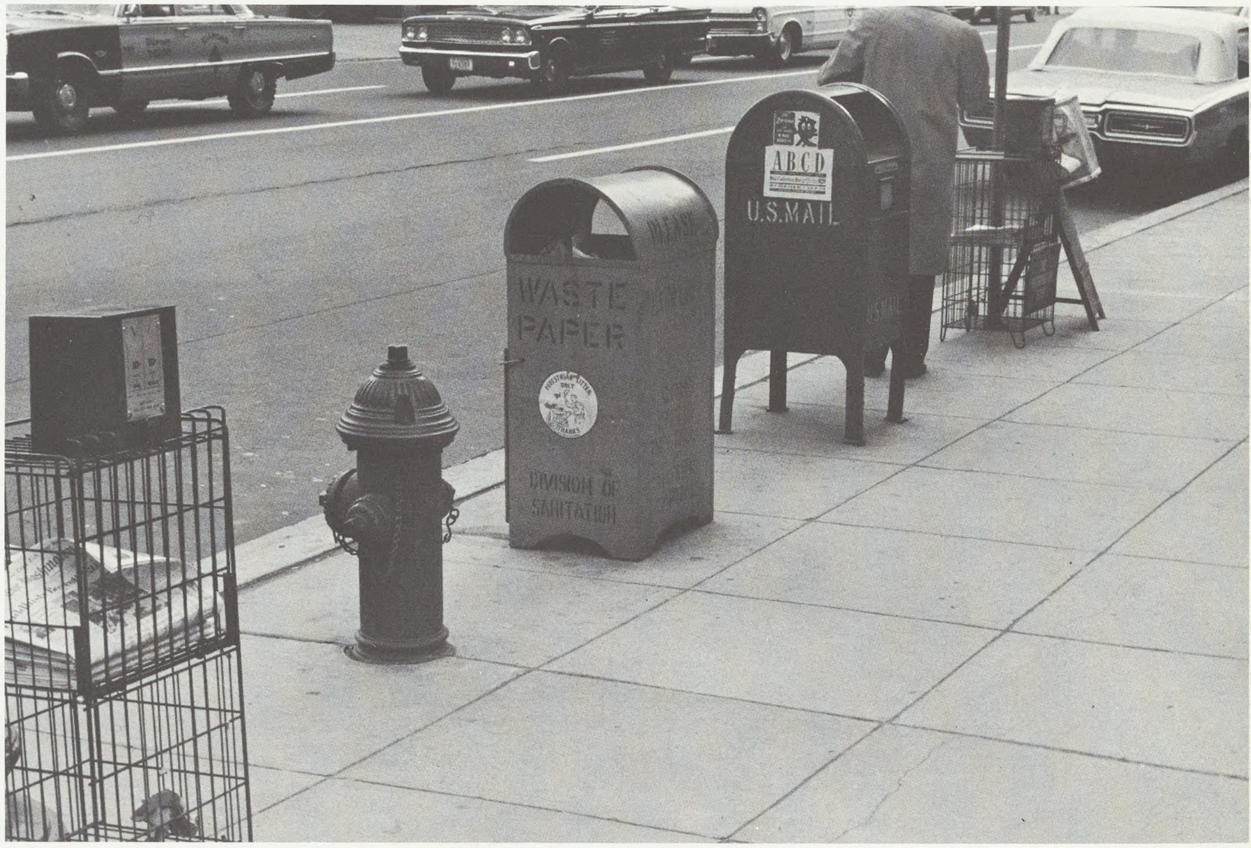

13

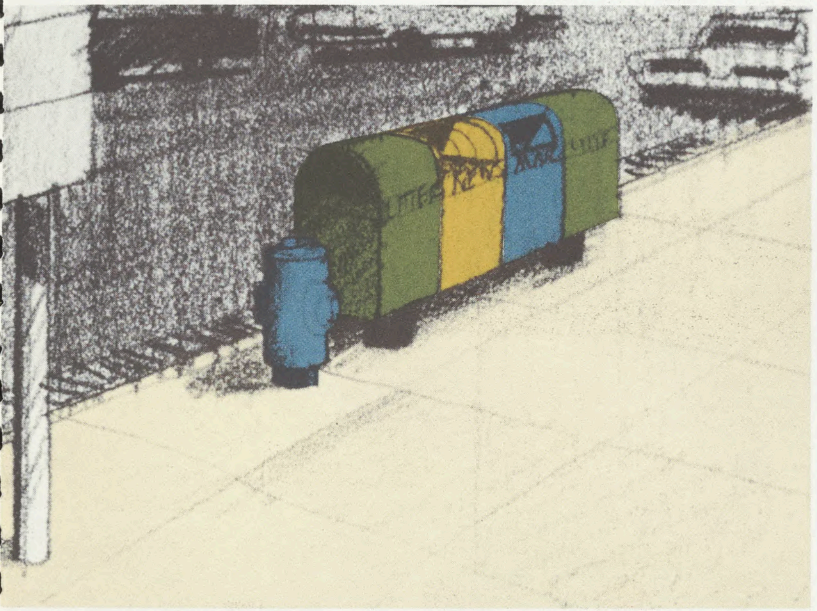

13

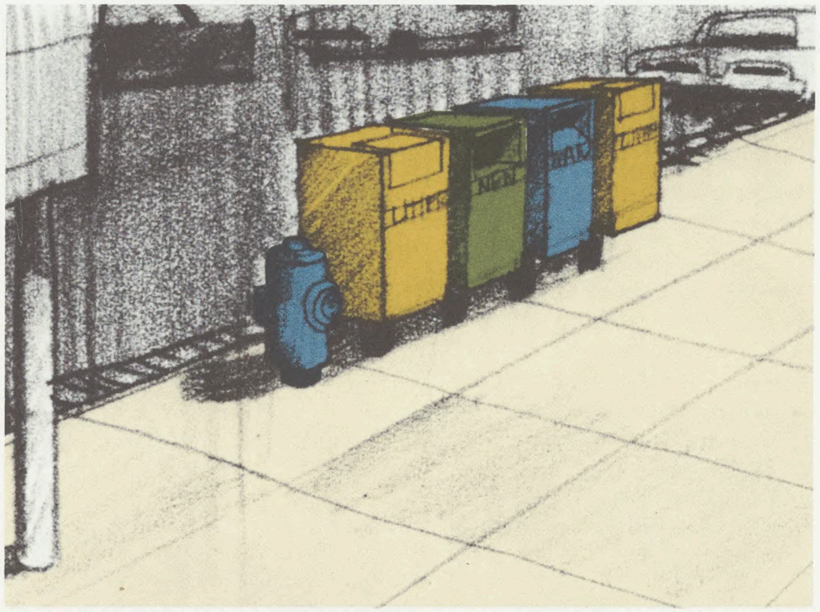
2

Street Furniture Study: Federal Area Constitution Ave.

The design of a consolidated element incorporating many of the single units of the street can take many forms. The particular design possibilities are many and in a larger sense this is less important than the idea of the grouping itself. The four variations here show that the approach can result in many different design expressions.




LITTER
NEWS
MAIL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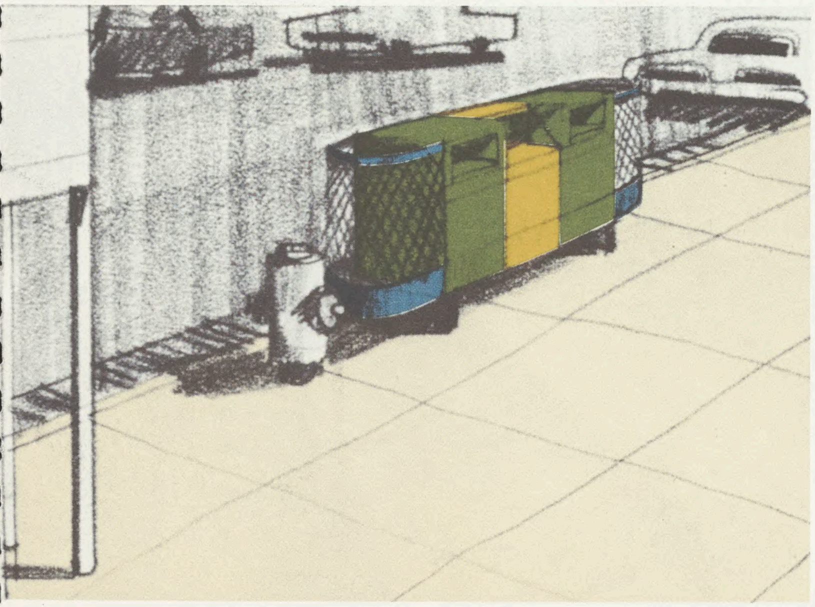

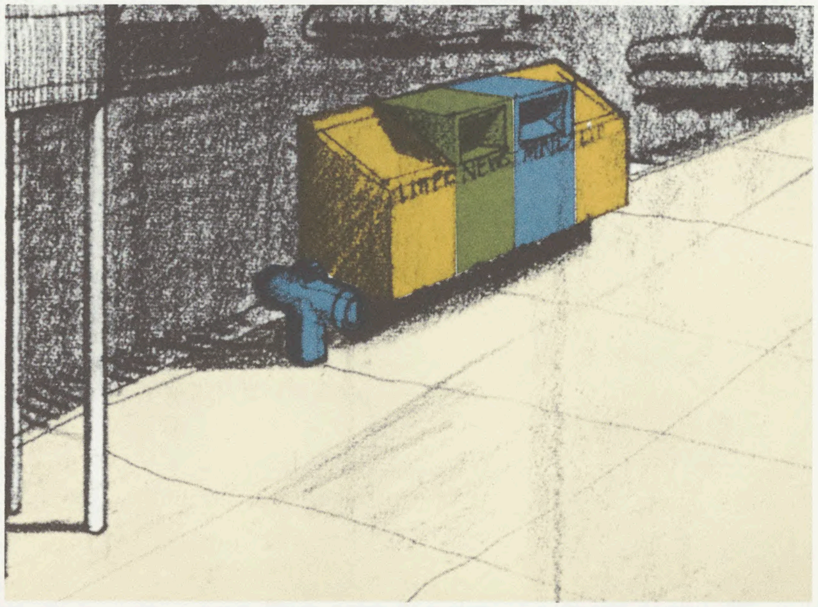
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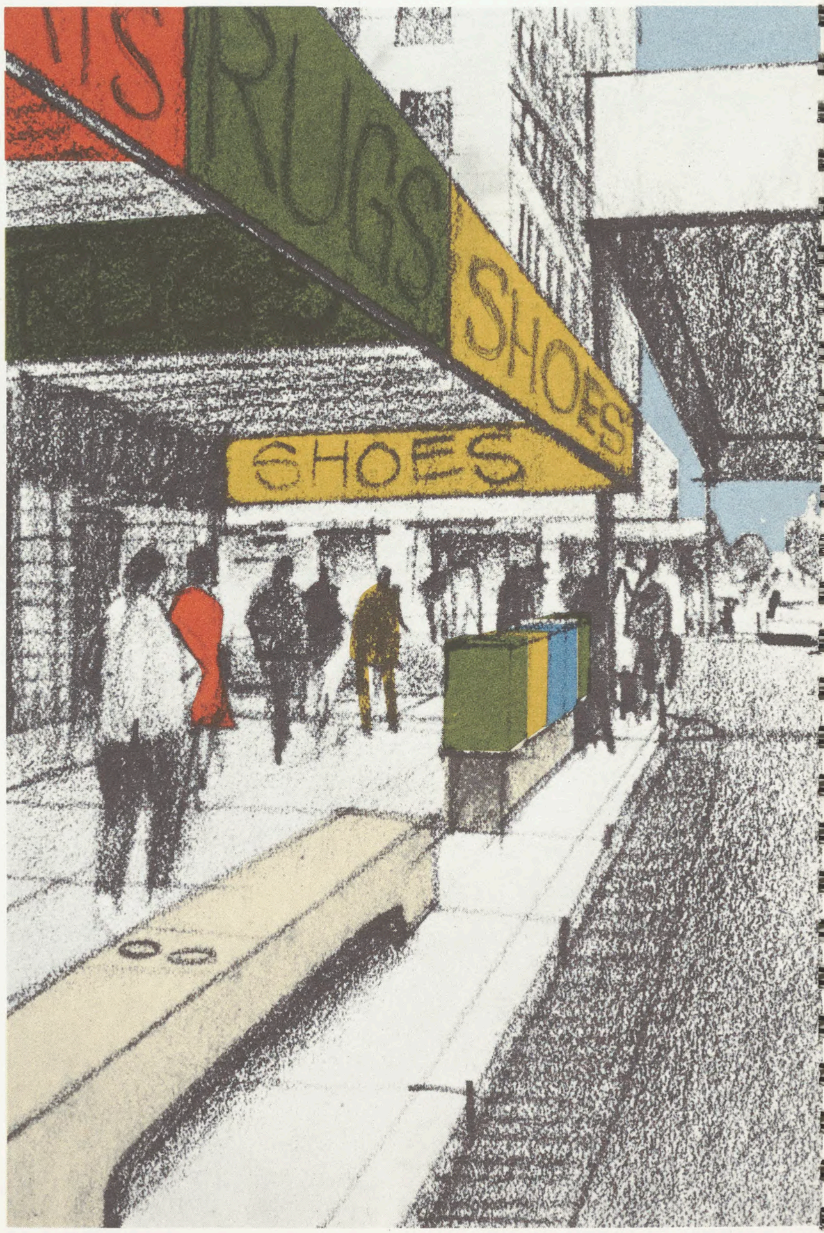
Design Opportunity: Shopping Streets

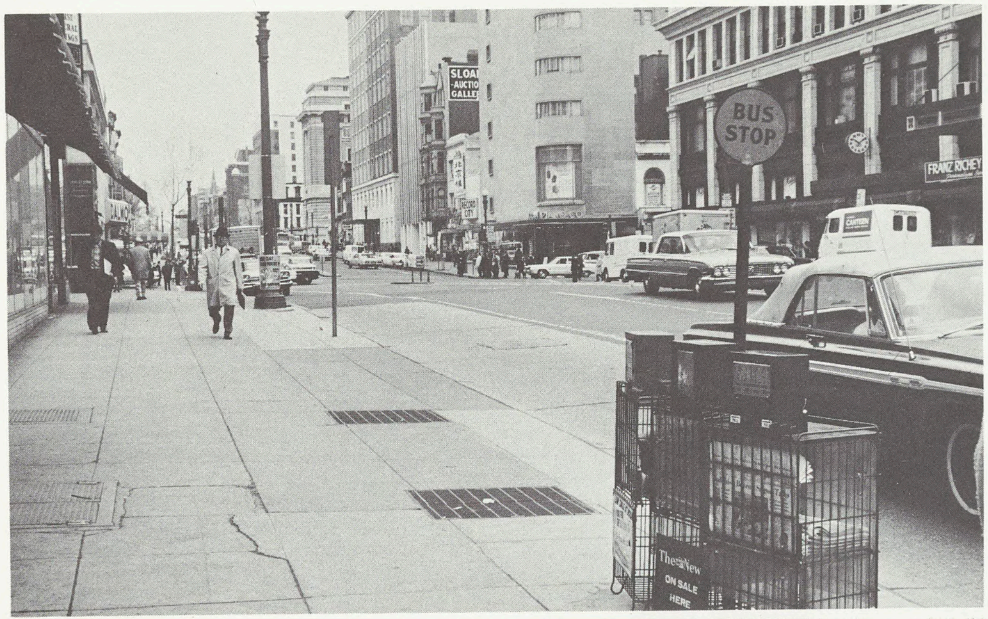
Places for people to stop and sit are quite feasible on the wider sidewalks of Washington. Parking meters and regulatory parking signs may be integrated with the benches and an edge of benches on a curb would control jaywalking.

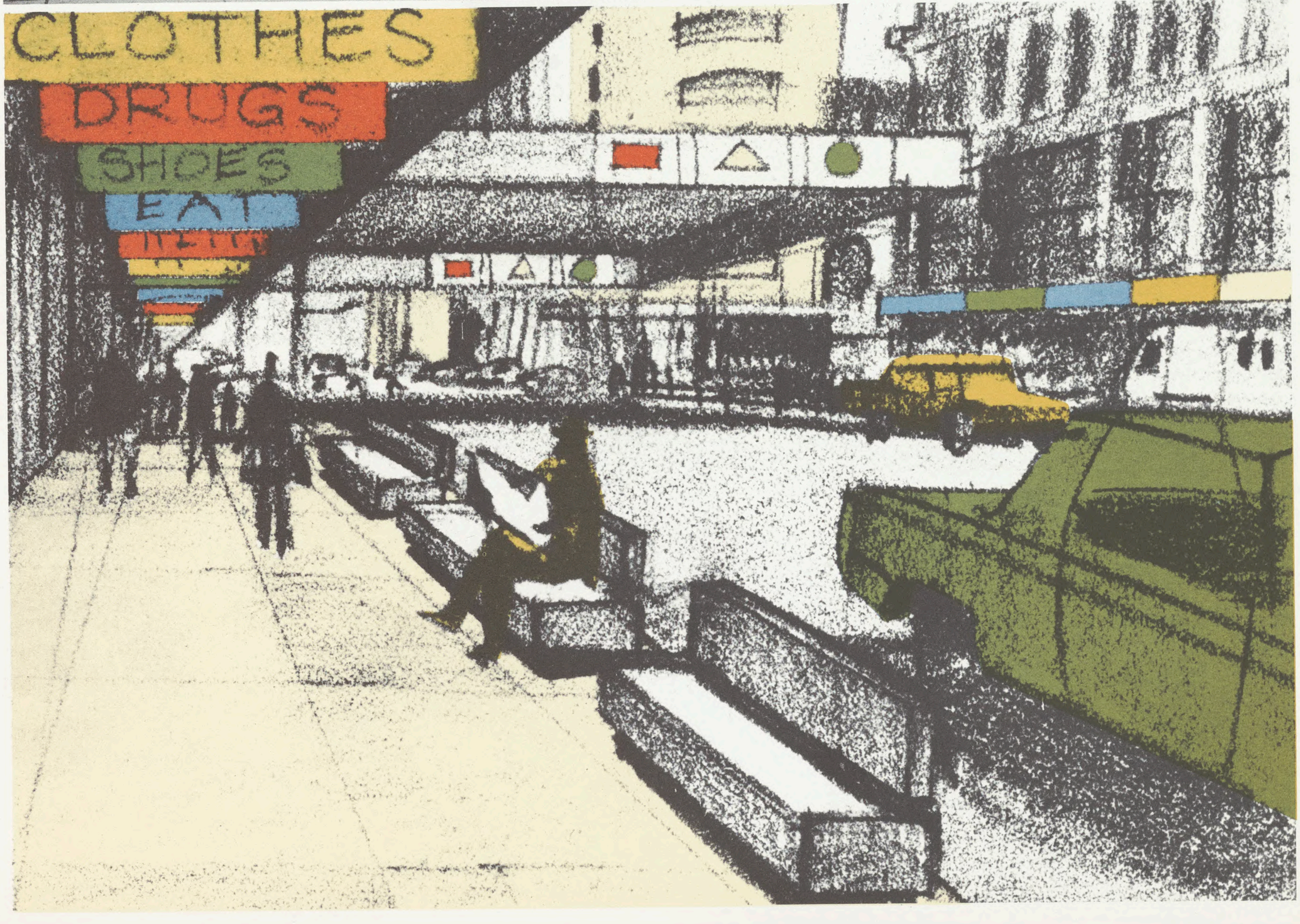
The coordination of these elements would provide a more structured street environment.

Suggested here is a covered pedestrian area, both along the sidewalks and over the street at the inter-section. Besides providing weather protection this would serve to unify signals and route identification over the street and it also would provide a consistent structure to organize commercial signs. Identification of stores for pedestrians could be from below the canopy while the facia of the canopy could be seen from vehicles in the street.

At night the sidewalks and pedestrian crossings could be brightly illuminated from lights in the canopies.




BUS STOP
FRANZ RICHEY
ON SALE HERE


CLOTHES
DRUGS
SHOES
EAT

2

Graphics and Signs

We recommend that a project be started immediately to develop a communication system which will increase the legibility and meaning of the existing patterns of movement for the driver and the pedestrian.

Legibility occurs when information presented is easily perceived and interpreted. Meaning occurs when the relationship between an individual and his environment is reinforced and gratifying. Signs that provide orientation and identity can also help to generate, a sense of place. The total aspect of this problem makes it possible to consider the improvement of the city's visual image, both for the stranger and the Washingtonian.

Given the complex information that must be communicated, it is obvious that a system must be arrived at that will enable a person to locate specific objectives without having to read all the information in his visual field, most of which will be irrelevant to his particular decision sequence. To discriminate between categories of information a system must include a coding of the visual and discursive information presented. These codes should serve as the basic structure of the graphic development.

The decision sequence must be translated into a hierarchical order of information. Basic information, crucial to the movement of the public destined for particular goals (airports, tourist attractions, etc.) should be given top priority. This becomes primary information and must be visually coded in such a way as to be high on a legibility gradient.

We also found that at critical decision points of the street system there is often such a great accumulation of information that it is impossible for a stranger at any normal vehicle speed to differentiate between alternatives. A person is simply confused by a vast array of information if it is offered in an unstructured way.

There is much shoddy detailing of elements. Even if a sign makes sense in its location and is carefully positioned, these positive effects may be cancelled out by poor construction. There is no relationship of tree to sign, or sign to meter, or meter to wastebasket. They all merely 'happen' in a kind of organic accretion.

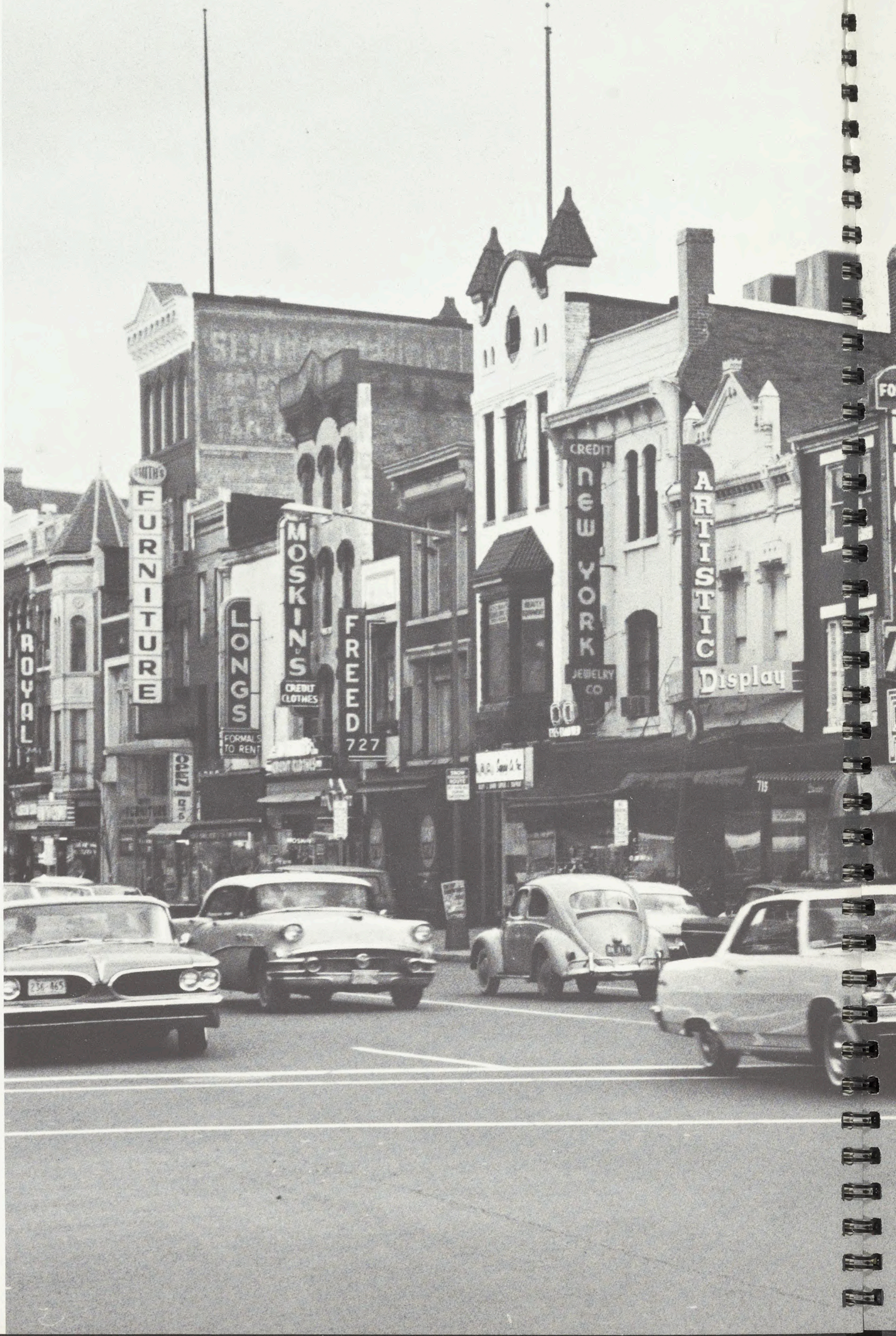
It is also extremely important that the design of the signs be of consistently high quality. Signs should be carefully and consistently composed, lettered, located, and detailed. There is no substitute. The naive signs stating "Keep Washington Beautiful," which are ugly in themselves are a travesty. Signs are often located in tree planting beds and they overwhelm the young trees. One cancels the other. A thoroughly coordinated system of signs of all types, ranging from major directional route signs for vehicles to tiny identification signs for pedestrians will be necessary.

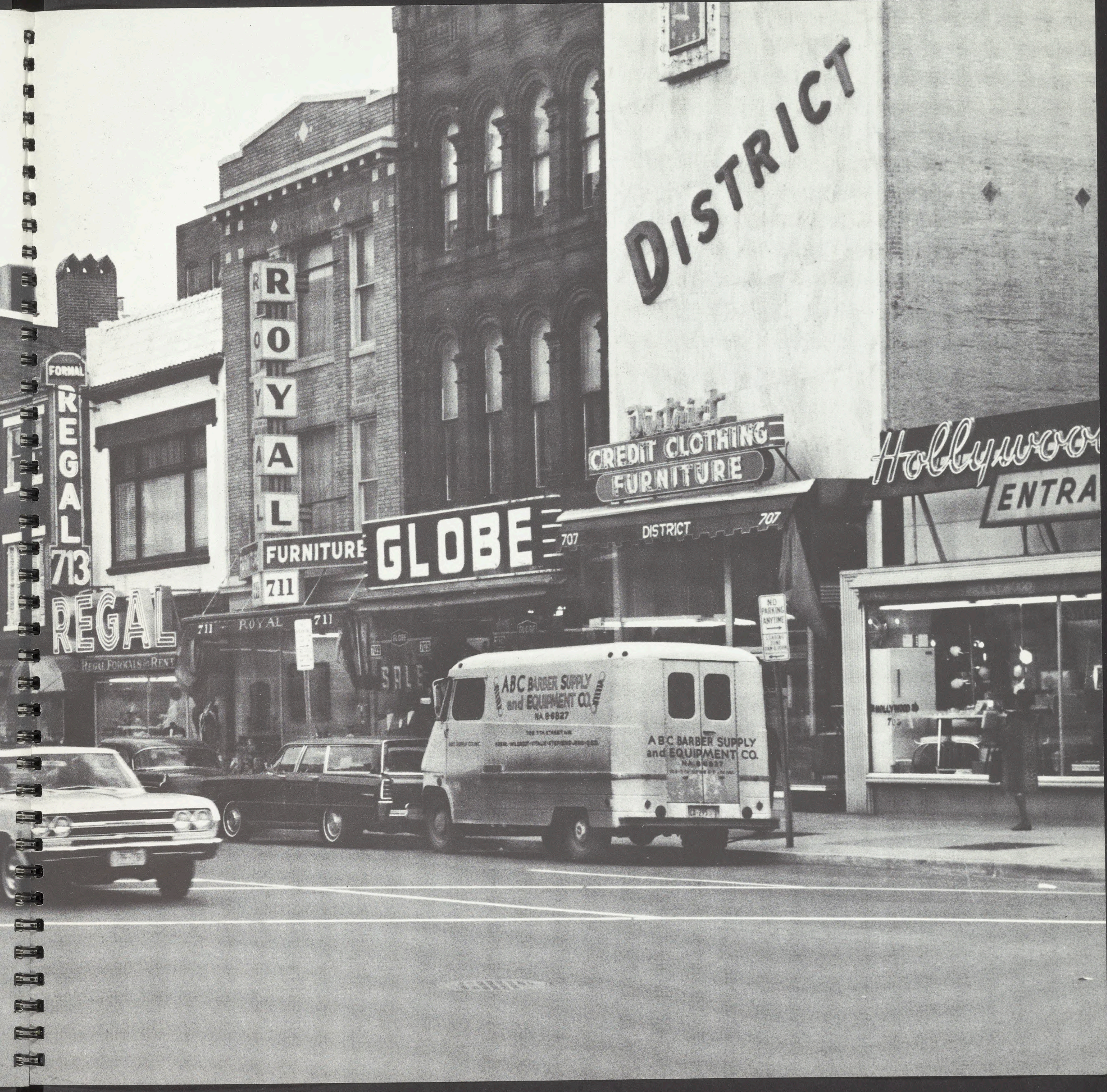
15 ST.
PENNSYLVANIA AVENUE
NO LEFT TURN
TOW A
ZON
NO
7-930
4-630
MONDAY THRU FRIDAY
NO PARK'G
ANY
P ARK

2

Design Opportunity: Commercial Sign Control

It is quite obvious that all clutter is not public clutter. Much of the visual confusion is generated by private citizens. Commercial signs are probably the single most blatant offenders. Clear and definite controls in addition to those already in force are called for and these should be developed at once. Commercial signs not only out-shout each other, but also suppress important information such as traffic signals and signs; as a result everybody loses, nothing is legible.



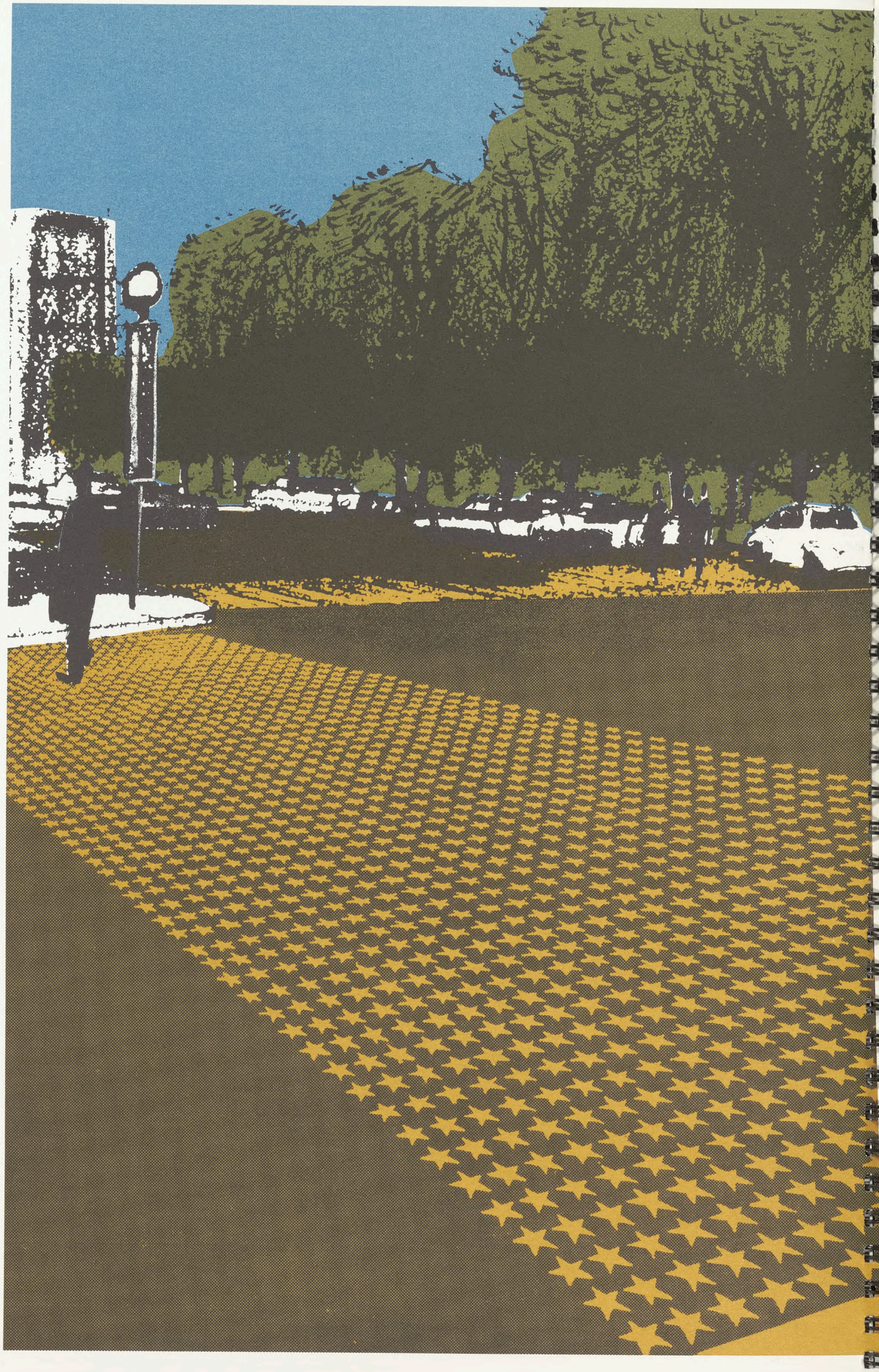

FORMAL
REGAL
713
REGAL
REGAL FORMALS for RENT
ROYAL
ROYAL
FURNITURE
711
711 ROYAL 711
GLOBE
SALE
District
CREDIT CLOTHING
FURNITURE
707 DISTRICT 707
DISTRICT
NO PARKING ANYTIME
ABC BARBER SUPPLY and EQUIPMENT CO.
NA 8-6827
Hollywoo
ENTRA

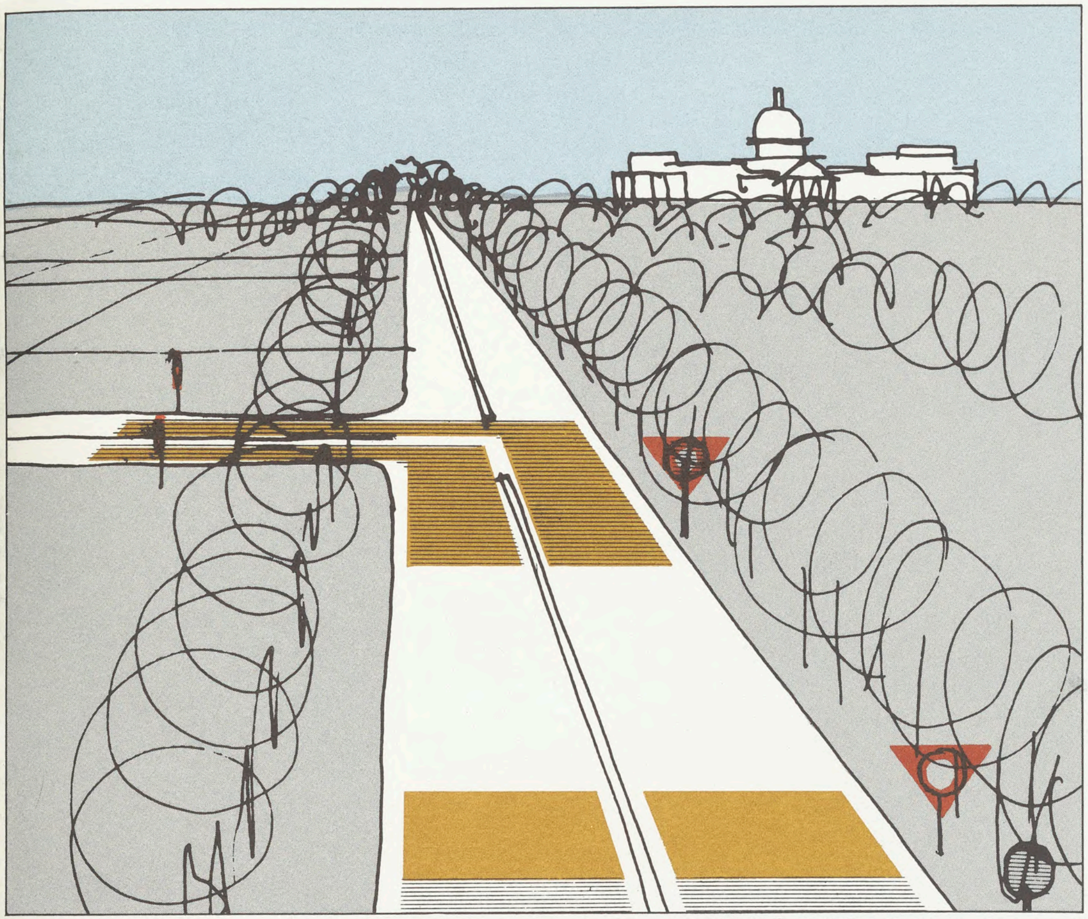
2

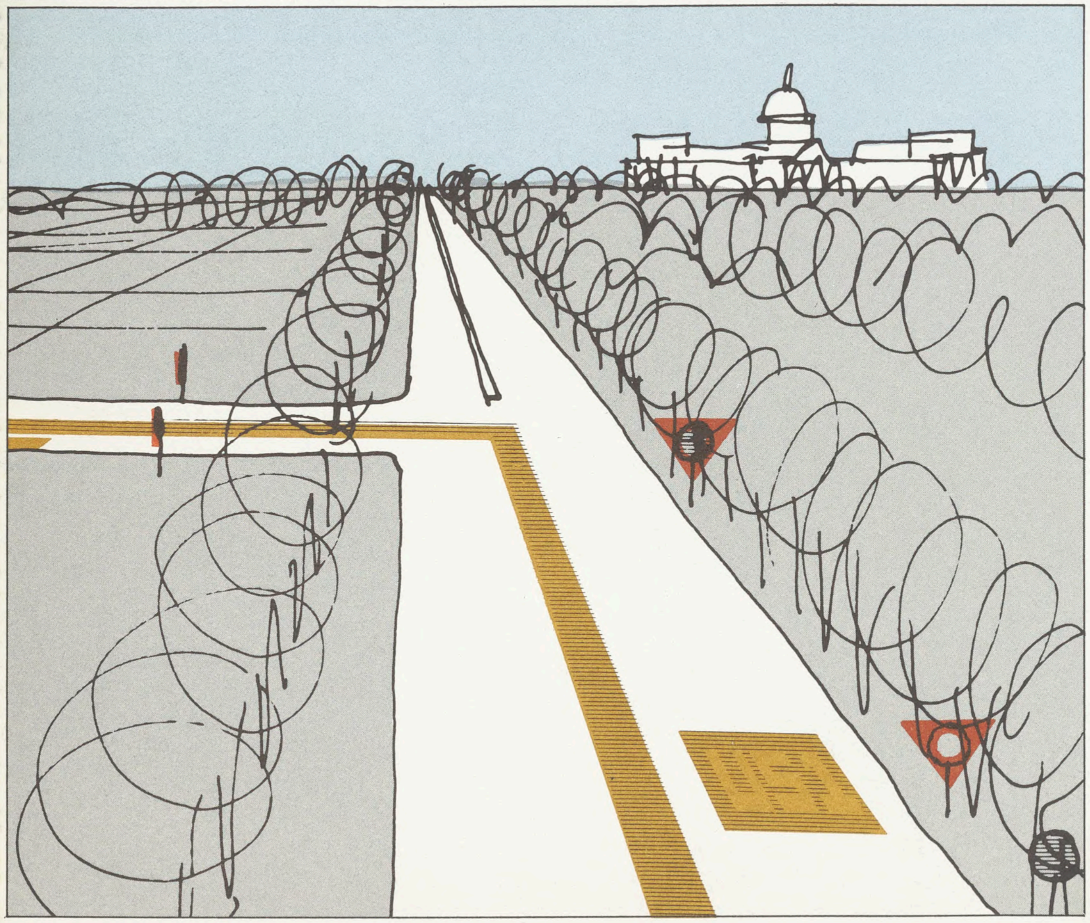
Design Opportunity: Pavement Markings

Pavement markings as well as special symbolic signs should be used to identify routes to the important central and tourist destinations. Clear destinations are important not only in the District but on all major approaches.

Pedestrian zones can also be reflected by clear pavement markings. In the Federal or tourist areas, pedestrian zones could be marked by a field of brass stars inset in the pavement as illustrated. This would not only provide a classification for walk zones, but it would also produce special symbolic quality befitting of the nation's capitol.





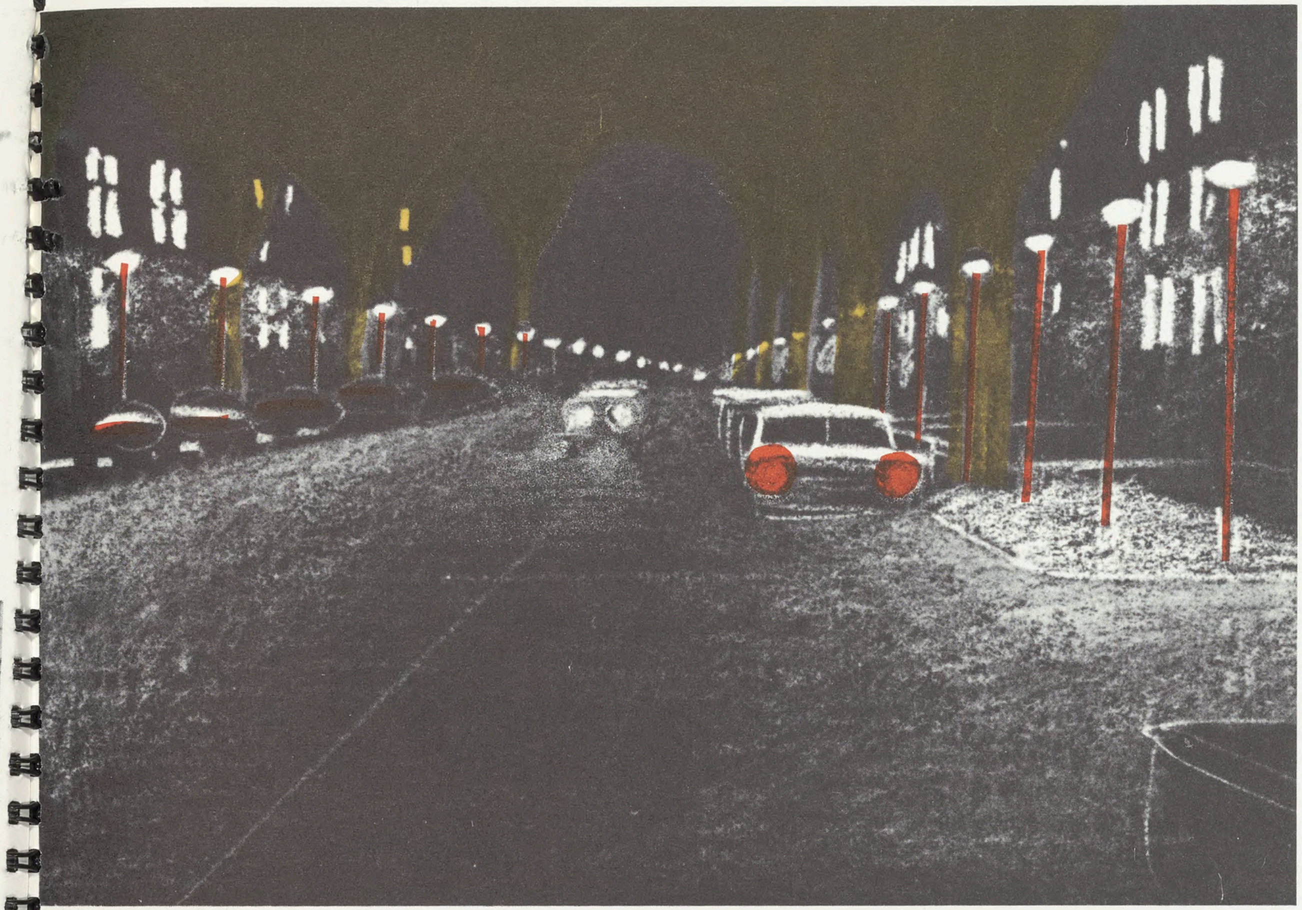


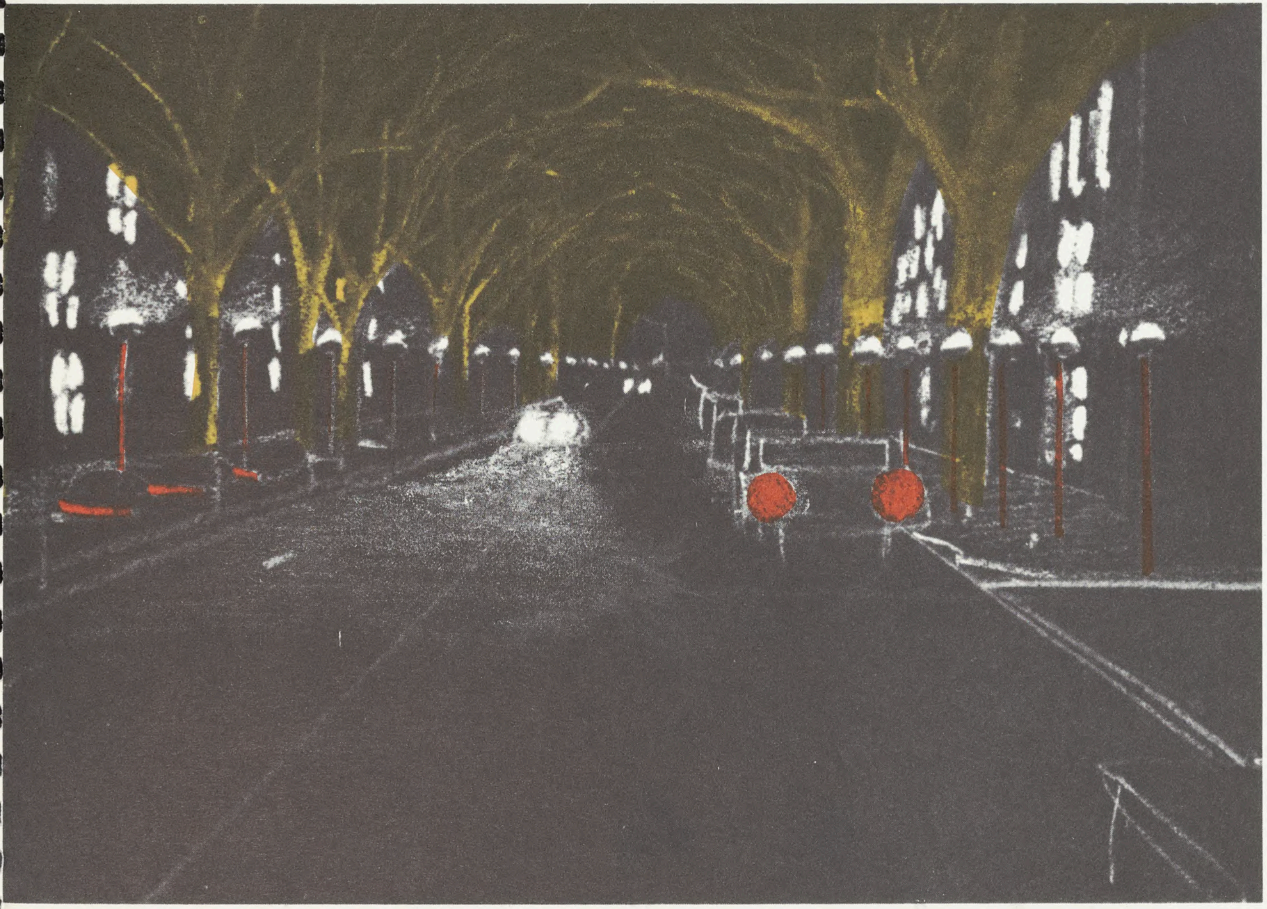
2

Design Opportunity: Lighting

The present lighting system with its monotonous repetition of point-light sources produces a neutralization of the night environment. Meaningful variations, which are very easy to achieve with lighting, are not exploited at all. They should be.

Downlighting on certain streets should be contrasted with uplighting using trees as reflectors. Different kinds of lighting should be used and foci such as special buildings and monuments could be strongly lighted.





It is important to again underscore the necessity of developing a clear orientation for people to the city's structure. We feel that this design premise is important and will generate future decisions that will articulate a common goal—comprehensibility.

We strongly recommend that a staff should be set up to assist the Commission to review and co-ordinate design proposals. The apparent visual anarchy of the streets is actually a reflection of the distributed authority responsible for the elements in the streets. Sanitation Departments, Police Departments, Traffic Departments, Fire Departments, Highway Departments, Transportation Authorities, the Park Service, etc., are all involved. The only way to achieve consistency in the face of this is to have a staff of designers who can assist the National Commission of Fine Arts in making meaningful decisions about the visual environment, and have them oversee all departments concerned with the location of elements in the street. There should also be an enforcement inspector to insure that the final result is in keeping with the approved designs.

Washington is not a city in which one has to contrive an order. The order exists in its unique and clear plan. The responsibility now is to make it apparent. The meaning of environmental experience depends upon the feedback a person receives from his environment. If this feedback comes from a clearer and more organized environment it can make the experience of the city both more pleasant and more meaningful.